FIG. 1

FIG. 2A

FIG. 2B

FIG. 3

Arg 37

Asp 33

2.12

2.02

2.73 2.84 2.94

His 50

Mg 1

2.82

2.87

3.17

3.24 Gly 36

3.31

Arg 46

2.91

2.84
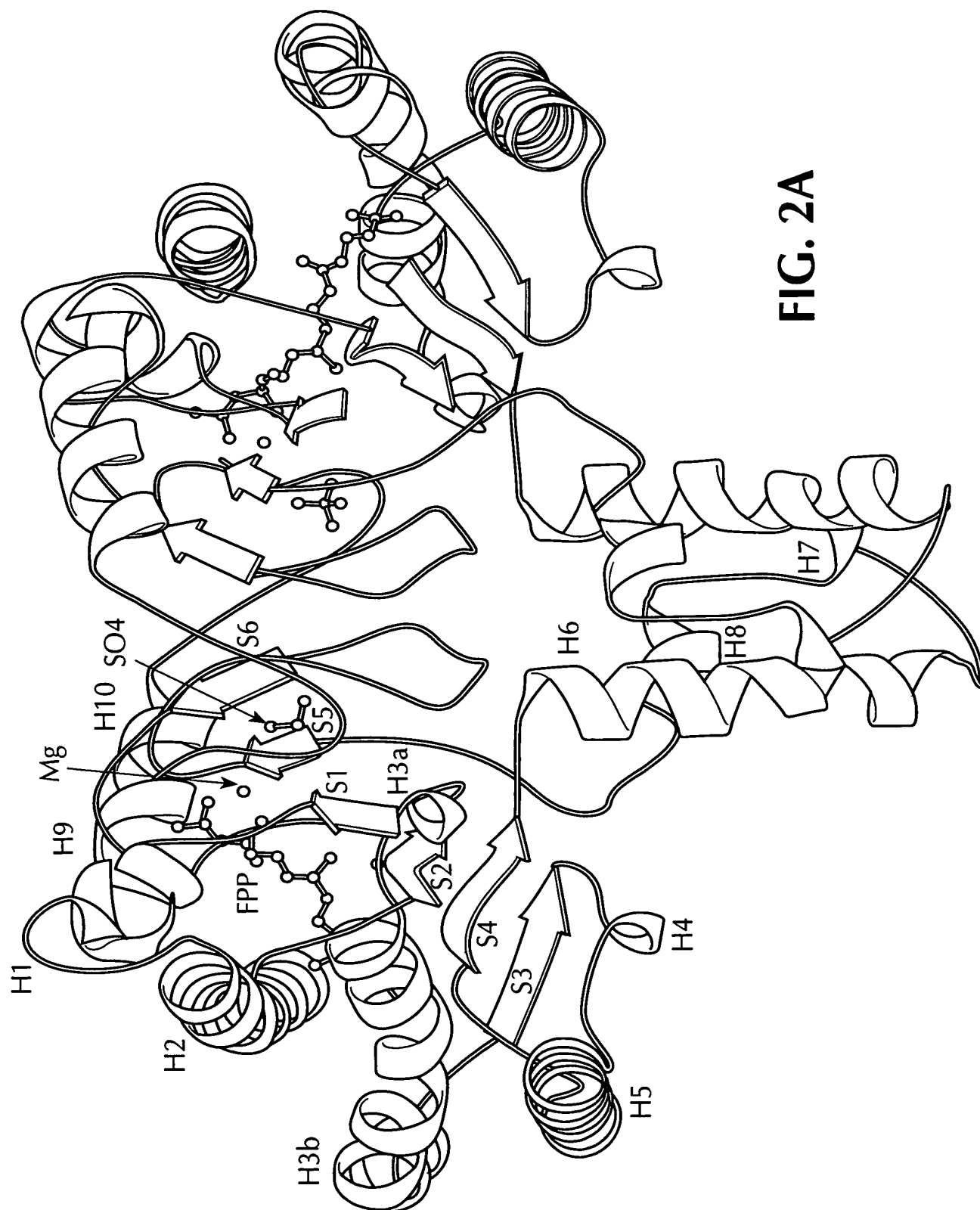
Gly 34
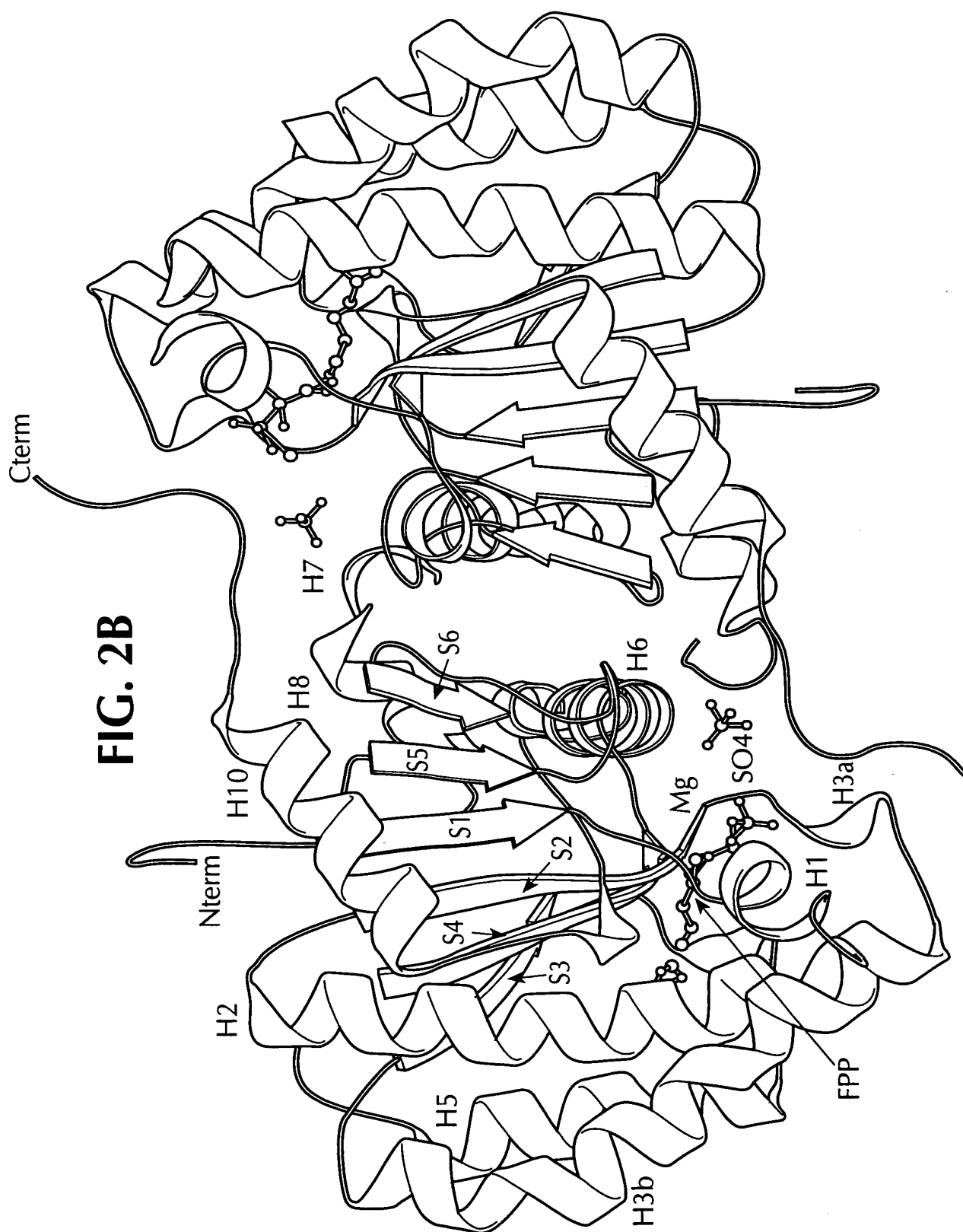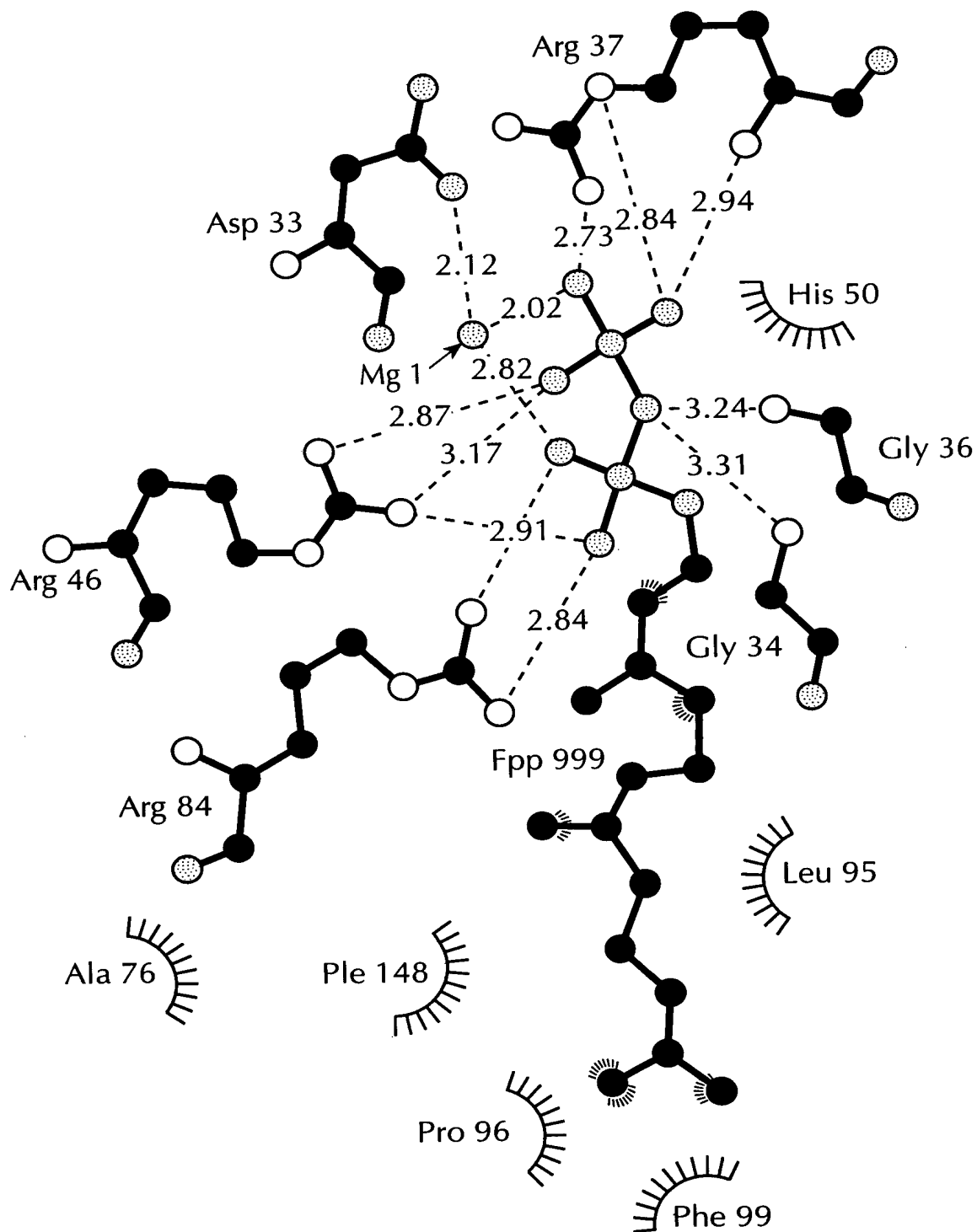
Fpp 999

Arg 84
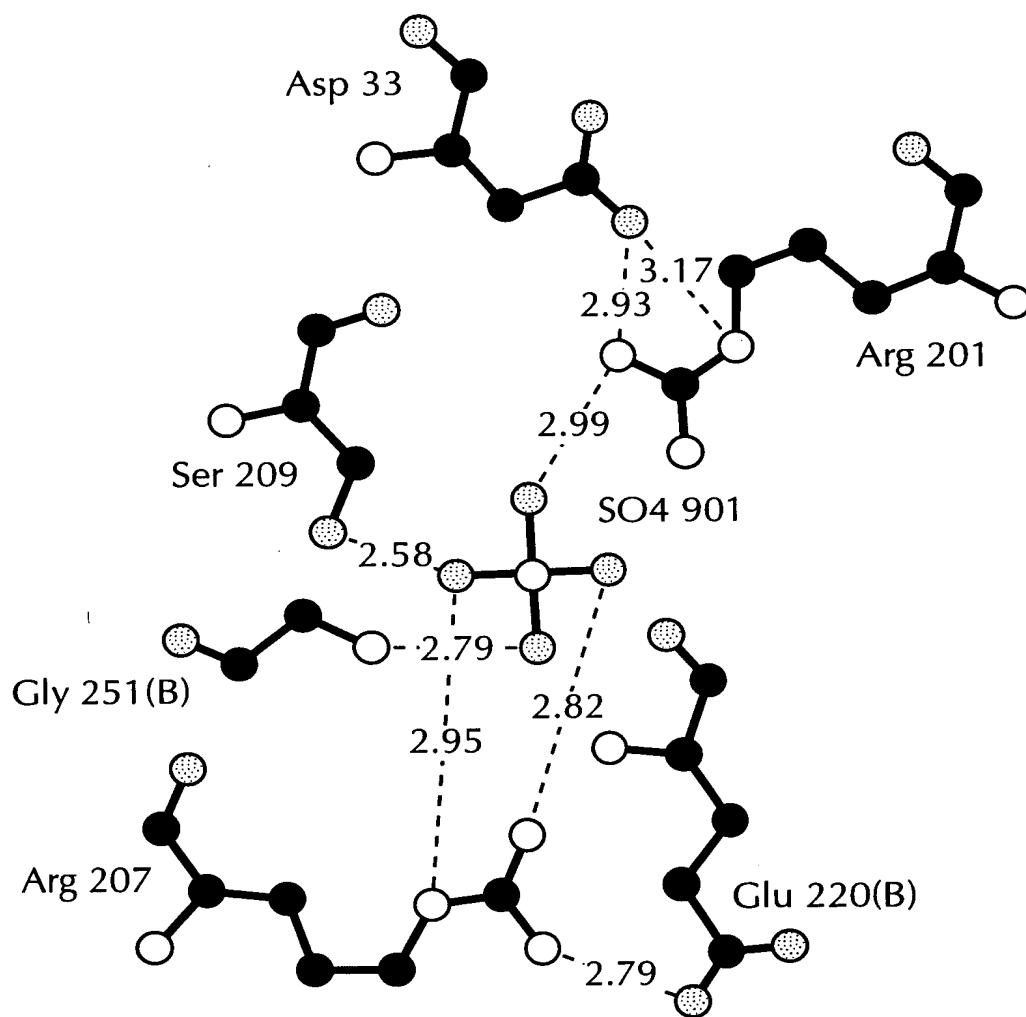
Leu 95

Ala 76

Ple 148

Pro 96

Phe 99

FIG. 4

Figure 5-1

```
REMARK  This is upps_18.pdb. Final refined coordinates
REMARK  Se-Met residues are labelled as MET.
REMARK  The waters coordinating Mg have chain ID Y, and all others have id W
CRYST1   58.187   58.187  159.260  90.00  90.00  90.00 P 41 21 2
SCALE1      0.017186  0.000000  0.000000        0.00000
SCALE2      0.000000  0.017186  0.000000        0.00000
SCALE3      0.000000  0.000000  0.006279        0.00000
ATOM      1  N   LEU A  19      35.033 -14.033  23.925  1.00 29.71           N
ATOM      3  CA  LEU A  19      33.645 -13.527  23.662  1.00 28.44           C
ATOM      5  CB  LEU A  19      33.433 -12.200  24.386  1.00 29.20           C
ATOM      8  CG  LEU A  19      33.497 -12.174  25.905  1.00 30.93           C
ATOM     10  CD1 LEU A  19      33.365 -10.745  26.347  1.00 30.45           C
ATOM     14  CD2 LEU A  19      32.446 -13.079  26.546  1.00 32.94           C
ATOM     18  C   LEU A  19      33.290 -13.243  22.196  1.00 28.33           C
ATOM     19  O   LEU A  19      34.152 -12.853  21.381  1.00 28.39           O
ATOM     22  N   ASP A  20      32.043 -13.522  21.852  1.00 26.28           N
ATOM     24  CA  ASP A  20      31.430 -12.987  20.654  1.00 25.36           C
ATOM     26  CB  ASP A  20      30.114 -13.715  20.440  1.00 25.86           C
ATOM     29  CG  ASP A  20      29.338 -13.191  19.252  1.00 28.24           C
ATOM     30  OD1 ASP A  20      29.702 -12.116  18.720  1.00 27.94           O
ATOM     31  OD2 ASP A  20      28.346 -13.782  18.780  1.00 28.73           O
ATOM     32  C   ASP A  20      31.284 -11.448  20.847  1.00 25.10           C
ATOM     33  O   ASP A  20      30.422 -10.971  21.609  1.00 25.20           O
ATOM     34  N   SER A  21      32.161 -10.687  20.182  1.00 24.38           N
ATOM     36  CA  SER A  21      32.201  -9.250  20.334  1.00 25.01           C
ATOM     38  CB  SER A  21      33.558  -8.635  19.892  1.00 24.93           C
ATOM     41  OG  SER A  21      33.778  -8.777  18.504  1.00 30.57           O
ATOM     43  C   SER A  21      31.009  -8.563  19.659  1.00 23.77           C
ATOM     44  O   SER A  21      30.757  -7.411  19.943  1.00 23.66           O
ATOM     45  N   SER A  22      30.264  -9.281  18.813  1.00 23.46           N
ATOM     47  CA  SER A  22      29.006  -8.768  18.259  1.00 23.43           C
ATOM     49  CB  SER A  22      28.644  -9.438  16.934  1.00 24.22           C
ATOM     52  OG  SER A  22      28.122 -10.727  17.122  1.00 24.09           O
ATOM     54  C   SER A  22      27.810  -8.939  19.191  1.00 22.93           C
ATOM     55  O   SER A  22      26.694  -8.605  18.803  1.00 23.33           O
ATOM     56  N   ASN A  23      28.007  -9.575  20.352  1.00 20.84           N
ATOM     58  CA  ASN A  23      26.875  -9.820  21.302  1.00 19.62           C
ATOM     60  CB  ASN A  23      26.384 -11.251  21.172  1.00 18.76           C
ATOM     63  CG  ASN A  23      25.113 -11.536  21.976  1.00 21.31           C
ATOM     64  OD1 ASN A  23      24.298 -10.647  22.196  1.00 22.93           O
ATOM     65  ND2 ASN A  23      24.926 -12.813  22.369  1.00 17.10           N
ATOM     68  C   ASN A  23      27.219  -9.495  22.777  1.00 19.72           C
ATOM     69  O   ASN A  23      26.911 -10.255  23.717  1.00 20.19           O
ATOM     70  N   ILE A  24      27.815  -8.351  22.950  1.00 20.07           N
ATOM     72  CA  ILE A  24      28.017  -7.801  24.267  1.00 19.87           C
ATOM     74  CB  ILE A  24      28.992  -6.710  24.240  1.00 20.02           C
```

Figure 5-2

```
ATOM    76  CG1 ILE A  24    30.345   -7.120  23.579  1.00 19.94          C
ATOM    79  CD1 ILE A  24    30.888   -8.399  24.046  1.00 24.18          C
ATOM    83  CG2 ILE A  24    29.233   -6.194  25.663  1.00 18.86          C
ATOM    87  C   ILE A  24    26.635   -7.338  24.764  1.00 19.12          C
ATOM    88  O   ILE A  24    25.962   -6.552  24.107  1.00 19.21          O
ATOM    89  N   PRO A  25    26.201   -7.824  25.916  1.00 19.24          N
ATOM    90  CA  PRO A  25    24.934   -7.368  26.506  1.00 18.36          C
ATOM    92  CB  PRO A  25    24.915   -7.997  27.889  1.00 18.96          C
ATOM    95  CG  PRO A  25    26.102   -8.809  28.010  1.00 18.56          C
ATOM    98  CD  PRO A  25    26.855   -8.857  26.735  1.00 19.05          C
ATOM   101  C   PRO A  25    24.905   -5.887  26.693  1.00 17.44          C
ATOM   102  O   PRO A  25    25.893   -5.268  27.089  1.00 15.46          O
ATOM   103  N   GLU A  26    23.730   -5.303  26.481  1.00 15.44          N
ATOM   105  CA  GLU A  26    23.637   -3.878  26.633  1.00 16.23          C
ATOM   107  CB  GLU A  26    22.449   -3.320  25.840  1.00 17.12          C
ATOM   110  CG  GLU A  26    22.548   -3.704  24.368  1.00 18.68          C
ATOM   113  CD  GLU A  26    21.640   -2.901  23.452  1.00 21.85          C
ATOM   114  OE1 GLU A  26    20.565   -2.505  23.896  1.00 18.93          O
ATOM   115  OE2 GLU A  26    22.025   -2.645  22.276  1.00 23.48          O
ATOM   116  C   GLU A  26    23.524   -3.482  28.105  1.00 16.17          C
ATOM   117  O   GLU A  26    23.977   -2.411  28.512  1.00 16.61          O
ATOM   118  N   HIS A  27    22.869   -4.317  28.894  1.00 15.09          N
ATOM   120  CA  HIS A  27    22.602   -3.979  30.303  1.00 13.86          C
ATOM   122  CB  HIS A  27    21.169   -3.471  30.454  1.00 14.52          C
ATOM   125  CG  HIS A  27    20.807   -3.047  31.846  1.00 13.99          C
ATOM   126  ND1 HIS A  27    19.547   -2.631  32.210  1.00 13.45          N
ATOM   128  CE1 HIS A  27    19.544   -2.299  33.501  1.00 14.66          C
ATOM   130  NE2 HIS A  27    20.759   -2.467  33.975  1.00 15.65          N
ATOM   132  CD2 HIS A  27    21.572   -2.938  32.970  1.00 15.42          C
ATOM   134  C   HIS A  27    22.842   -5.181  31.192  1.00 13.69          C
ATOM   135  O   HIS A  27    22.174   -6.177  31.040  1.00 14.43          O
ATOM   136  N   ILE A  28    23.813   -5.069  32.114  1.00 13.47          N
ATOM   138  CA  ILE A  28    24.143   -6.115  33.106  1.00 12.14          C
ATOM   140  CB  ILE A  28    25.633   -6.505  33.077  1.00 12.79          C
ATOM   142  CG1 ILE A  28    26.033   -7.122  31.694  1.00 14.15          C
ATOM   145  CD1 ILE A  28    27.552   -7.405  31.516  1.00 14.23          C
ATOM   149  CG2 ILE A  28    25.909   -7.568  34.205  1.00 14.07          C
ATOM   153  C   ILE A  28    23.800   -5.526  34.469  1.00 11.97          C
ATOM   154  O   ILE A  28    24.102   -4.405  34.736  1.00 13.91          O
ATOM   155  N   ALA A  29    23.090   -6.293  35.296  1.00 11.82          N
ATOM   157  CA  ALA A  29    22.679   -5.872  36.585  1.00 12.85          C
ATOM   159  CB  ALA A  29    21.121   -5.930  36.677  1.00 14.01          C
ATOM   163  C   ALA A  29    23.276   -6.875  37.525  1.00 12.33          C
ATOM   164  O   ALA A  29    23.216   -8.083  37.266  1.00 12.21          O
ATOM   165  N   ILE A  30    23.910   -6.383  38.569  1.00 13.85          N
ATOM   167  CA  ILE A  30    24.578   -7.242  39.519  1.00 12.99          C
ATOM   169  CB  ILE A  30    26.105   -6.952  39.505  1.00 12.60          C
ATOM   171  CG1 ILE A  30    26.682   -7.208  38.127  1.00 15.31          C
```

Figure 5-3

ATOM	174	CD1	ILE	A	30	28.108	-6.809	38.004	1.00	16.29	C
ATOM	178	CG2	ILE	A	30	26.806	-7.805	40.574	1.00	14.00	C
ATOM	182	C	ILE	A	30	24.150	-7.055	40.968	1.00	12.79	C
ATOM	183	O	ILE	A	30	24.159	-5.944	41.477	1.00	14.09	O
ATOM	184	N	ILE	A	31	23.847	-8.154	41.650	1.00	12.48	N
ATOM	186	CA	ILE	A	31	23.551	-8.105	43.081	1.00	13.09	C
ATOM	188	CB	ILE	A	31	22.553	-9.121	43.465	1.00	11.75	C
ATOM	190	CG1	ILE	A	31	21.174	-8.742	42.825	1.00	13.25	C
ATOM	193	CD1	ILE	A	31	20.156	-9.766	42.973	1.00	12.90	C
ATOM	197	CG2	ILE	A	31	22.335	-9.189	45.034	1.00	15.80	C
ATOM	201	C	ILE	A	31	24.889	-8.373	43.769	1.00	13.23	C
ATOM	202	O	ILE	A	31	25.392	-9.477	43.731	1.00	14.66	O
ATOM	203	N	MET	A	32	25.434	-7.351	44.376	1.00	15.78	N
ATOM	205	CA	MET	A	32	26.787	-7.426	44.960	1.00	16.24	C
ATOM	207	CB	MET	A	32	27.365	-6.045	45.157	1.00	16.42	C
ATOM	210	CG	MET	A	32	27.891	-5.340	43.828	1.00	17.63	C
ATOM	213	SE	MET	A	32	28.542	-3.613	44.076	1.00	22.61	SE
ATOM	214	CE	MET	A	32	27.255	-2.828	44.924	1.00	14.77	C
ATOM	218	C	MET	A	32	26.538	-8.142	46.288	1.00	17.32	C
ATOM	219	O	MET	A	32	25.757	-7.657	47.110	1.00	20.89	O
ATOM	220	N	ASP	A	33	27.079	-9.328	46.468	1.00	18.33	N
ATOM	222	CA	ASP	A	33	26.756	-10.082	47.678	1.00	16.55	C
ATOM	224	CB	ASP	A	33	25.602	-11.059	47.451	1.00	17.43	C
ATOM	227	CG	ASP	A	33	24.966	-11.557	48.753	1.00	17.30	C
ATOM	228	OD1	ASP	A	33	25.318	-10.996	49.855	1.00	13.13	O
ATOM	229	OD2	ASP	A	33	24.093	-12.463	48.739	1.00	15.77	O
ATOM	230	C	ASP	A	33	28.003	-10.812	48.146	1.00	17.89	C
ATOM	231	O	ASP	A	33	28.890	-11.168	47.322	1.00	15.75	O
ATOM	232	N	GLY	A	34	28.079	-11.034	49.470	1.00	17.72	N
ATOM	234	CA	GLY	A	34	29.241	-11.715	50.069	1.00	18.78	C
ATOM	237	C	GLY	A	34	30.348	-10.861	50.730	1.00	19.87	C
ATOM	238	O	GLY	A	34	31.387	-11.406	51.165	1.00	19.72	O
ATOM	239	N	ASN	A	35	30.162	-9.550	50.806	1.00	19.48	N
ATOM	241	CA	ASN	A	35	31.120	-8.703	51.500	1.00	18.76	C
ATOM	243	CB	ASN	A	35	30.683	-7.260	51.489	1.00	17.54	C
ATOM	246	CG	ASN	A	35	30.826	-6.585	50.103	1.00	17.11	C
ATOM	247	OD1	ASN	A	35	31.338	-7.186	49.132	1.00	19.59	O
ATOM	248	ND2	ASN	A	35	30.409	-5.328	50.022	1.00	18.12	N
ATOM	251	C	ASN	A	35	31.393	-9.135	52.967	1.00	19.03	C
ATOM	252	O	ASN	A	35	32.527	-9.182	53.370	1.00	18.97	O
ATOM	253	N	GLY	A	36	30.359	-9.376	53.773	1.00	20.74	N
ATOM	255	CA	GLY	A	36	30.567	-9.759	55.176	1.00	21.53	C
ATOM	258	C	GLY	A	36	31.201	-11.128	55.341	1.00	23.14	C
ATOM	259	O	GLY	A	36	32.102	-11.289	56.178	1.00	24.55	O
ATOM	260	N	ARG	A	37	30.761	-12.104	54.553	1.00	21.56	N
ATOM	262	CA	ARG	A	37	31.399	-13.431	54.528	1.00	21.24	C
ATOM	264	CB	ARG	A	37	30.685	-14.373	53.589	1.00	21.38	C

Figure 5-4

ATOM	267	CG	ARG A	37	29.551	-15.084	54.251	1.00	21.21	C
ATOM	270	CD	ARG A	37	28.656	-15.797	53.253	1.00	23.93	C
ATOM	273	NE	ARG A	37	27.859	-14.811	52.517	1.00	22.62	N
ATOM	275	CZ	ARG A	37	26.980	-15.116	51.571	1.00	21.04	C
ATOM	276	NH1	ARG A	37	26.822	-16.374	51.209	1.00	22.62	N
ATOM	279	NH2	ARG A	37	26.262	-14.134	51.000	1.00	20.48	N
ATOM	282	C	ARG A	37	32.902	-13.383	54.167	1.00	20.23	C
ATOM	283	O	ARG A	37	33.725	-14.070	54.813	1.00	19.75	O
ATOM	284	N	TRP A	38	33.260	-12.519	53.232	1.00	19.40	N
ATOM	286	CA	TRP A	38	34.611	-12.336	52.826	1.00	20.13	C
ATOM	288	CB	TRP A	38	34.653	-11.268	51.739	1.00	19.45	C
ATOM	291	CG	TRP A	38	35.994	-11.109	51.144	1.00	20.31	C
ATOM	292	CD1	TRP A	38	36.512	-11.754	50.074	1.00	17.50	C
ATOM	294	NE1	TRP A	38	37.792	-11.311	49.828	1.00	20.60	N
ATOM	296	CE2	TRP A	38	38.097	-10.342	50.747	1.00	20.37	C
ATOM	297	CD2	TRP A	38	36.990	-10.187	51.577	1.00	19.63	C
ATOM	298	CE3	TRP A	38	37.054	-9.252	52.613	1.00	22.63	C
ATOM	300	CZ3	TRP A	38	38.204	-8.533	52.778	1.00	22.44	C
ATOM	302	CH2	TRP A	38	39.271	-8.698	51.945	1.00	24.20	C
ATOM	304	CZ2	TRP A	38	39.250	-9.597	50.910	1.00	24.03	C
ATOM	306	C	TRP A	38	35.451	-11.862	54.018	1.00	20.75	C
ATOM	307	O	TRP A	38	36.602	-12.292	54.194	1.00	22.81	O
ATOM	308	N	ALA A	39	34.919	-10.910	54.755	1.00	21.08	N
ATOM	310	CA	ALA A	39	35.655	-10.406	55.936	1.00	22.51	C
ATOM	312	CB	ALA A	39	35.048	-9.206	56.470	1.00	21.11	C
ATOM	316	C	ALA A	39	35.728	-11.489	57.050	1.00	24.22	C
ATOM	317	O	ALA A	39	36.816	-11.692	57.653	1.00	23.31	O
ATOM	318	N	LYS A	40	34.600	-12.167	57.278	1.00	26.01	N
ATOM	320	CA	LYS A	40	34.472	-13.172	58.339	1.00	29.48	C
ATOM	322	CB	LYS A	40	33.086	-13.780	58.461	1.00	30.95	C
ATOM	325	CG	LYS A	40	32.738	-14.139	59.954	1.00	36.08	C
ATOM	328	CD	LYS A	40	31.382	-14.838	60.169	1.00	39.32	C
ATOM	331	CE	LYS A	40	30.948	-14.773	61.659	1.00	42.36	C
ATOM	334	NZ	LYS A	40	29.432	-14.866	61.939	1.00	40.77	N
ATOM	338	C	LYS A	40	35.442	-14.281	58.100	1.00	29.66	C
ATOM	339	O	LYS A	40	36.127	-14.706	59.022	1.00	32.17	O
ATOM	340	N	LYS A	41	35.624	-14.696	56.851	1.00	29.31	N
ATOM	342	CA	LYS A	41	36.663	-15.690	56.504	1.00	30.03	C
ATOM	344	CB	LYS A	41	36.810	-15.898	54.989	1.00	30.35	C
ATOM	347	CG	LYS A	41	35.700	-16.716	54.378	1.00	34.59	C
ATOM	350	CD	LYS A	41	35.955	-17.036	52.938	1.00	38.67	C
ATOM	353	CE	LYS A	41	34.861	-17.947	52.405	1.00	43.28	C
ATOM	356	NZ	LYS A	41	35.184	-18.413	51.037	1.00	46.88	N
ATOM	360	C	LYS A	41	38.050	-15.256	56.983	1.00	29.67	C

Figure 5-5

ATOM	361	O	LYS A	41	38.969	-16.085	57.147	1.00	28.21	O
ATOM	362	N	ARG A	42	38.243	-13.953	57.120	1.00	28.87	N
ATOM	364	CA	ARG A	42	39.562	-13.436	57.466	1.00	28.18	C
ATOM	366	CB	ARG A	42	39.961	-12.313	56.501	1.00	29.35	C
ATOM	369	CG	ARG A	42	40.021	-12.721	55.048	1.00	28.81	C
ATOM	372	CD	ARG A	42	40.021	-11.591	54.028	1.00	30.63	C
ATOM	375	NE	ARG A	42	40.388	-12.096	52.717	1.00	29.41	N
ATOM	377	CZ	ARG A	42	39.674	-12.941	51.956	1.00	29.02	C
ATOM	378	NH1	ARG A	42	38.455	-13.375	52.304	1.00	27.34	N
ATOM	381	NH2	ARG A	42	40.213	-13.354	50.812	1.00	32.07	N
ATOM	384	C	ARG A	42	39.616	-12.930	58.899	1.00	26.88	C
ATOM	385	O	ARG A	42	40.696	-12.382	59.308	1.00	27.41	O
ATOM	386	N	LYS A	43	38.573	-13.244	59.658	1.00	26.24	N
ATOM	388	CA	LYS A	43	38.339	-12.785	61.016	1.00	27.28	C
ATOM	390	CB	LYS A	43	39.358	-13.430	61.986	1.00	27.88	C
ATOM	393	CG	LYS A	43	39.291	-14.931	61.947	1.00	28.59	C
ATOM	396	CD	LYS A	43	38.104	-15.442	62.640	1.00	33.35	C
ATOM	399	CE	LYS A	43	38.276	-16.978	62.818	1.00	38.43	C
ATOM	402	NZ	LYS A	43	37.417	-17.508	63.913	1.00	41.99	N
ATOM	406	C	LYS A	43	38.339	-11.255	61.155	1.00	27.79	C
ATOM	407	O	LYS A	43	38.579	-10.714	62.260	1.00	28.30	O
ATOM	408	N	MET A	44	38.032	-10.557	60.051	1.00	25.78	N
ATOM	410	CA	MET A	44	37.942	-9.116	60.066	1.00	24.14	C
ATOM	412	CB	MET A	44	38.546	-8.522	58.802	1.00	24.94	C
ATOM	415	CG	MET A	44	39.959	-8.825	58.625	1.00	25.24	C
ATOM	418	SE	MET A	44	41.036	-7.933	59.950	1.00	30.88	SE
ATOM	419	CE	MET A	44	41.028	-6.193	59.231	1.00	25.65	C
ATOM	423	C	MET A	44	36.482	-8.695	60.224	1.00	23.07	C
ATOM	424	O	MET A	44	35.539	-9.481	60.007	1.00	23.62	O
ATOM	425	N	PRO A	45	36.260	-7.468	60.653	1.00	21.02	N
ATOM	426	CA	PRO A	45	34.912	-6.954	60.800	1.00	20.17	C
ATOM	428	CB	PRO A	45	35.125	-5.533	61.318	1.00	20.67	C
ATOM	431	CG	PRO A	45	36.473	-5.515	61.829	1.00	20.27	C
ATOM	434	CD	PRO A	45	37.267	-6.453	60.962	1.00	22.00	C
ATOM	437	C	PRO A	45	34.197	-6.854	59.442	1.00	18.68	C
ATOM	438	O	PRO A	45	34.781	-6.724	58.372	1.00	18.23	O
ATOM	439	N	ARG A	46	32.889	-6.902	59.538	1.00	19.31	N
ATOM	441	CA	ARG A	46	31.959	-6.830	58.381	1.00	20.60	C
ATOM	443	CB	ARG A	46	30.508	-6.844	58.873	1.00	20.47	C
ATOM	446	CG	ARG A	46	29.978	-8.248	59.297	1.00	19.15	C
ATOM	449	CD	ARG A	46	28.516	-8.291	59.565	1.00	17.43	C
ATOM	452	NE	ARG A	46	27.736	-7.846	58.379	1.00	18.75	N
ATOM	454	CZ	ARG A	46	27.475	-8.589	57.300	1.00	20.20	C
ATOM	455	NH1	ARG A	46	27.761	-9.864	57.264	1.00	18.60	N
ATOM	458	NH2	ARG A	46	26.879	-8.043	56.261	1.00	18.87	N

Figure 5-6

ATOM	461	C	ARG	A	46	32.251	-5.594	57.477	1.00	20.94	C
ATOM	462	O	ARG	A	46	32.392	-5.682	56.221	1.00	20.74	O
ATOM	463	N	ILE	A	47	32.445	-4.449	58.126	1.00	21.03	N
ATOM	465	CA	ILE	A	47	32.730	-3.218	57.399	1.00	21.24	C
ATOM	467	CB	ILE	A	47	32.773	-1.972	58.346	1.00	21.32	C
ATOM	469	CG1	ILE	A	47	33.840	-2.122	59.431	1.00	23.48	C
ATOM	472	CD1	ILE	A	47	34.146	-0.742	60.107	1.00	25.40	C
ATOM	476	CG2	ILE	A	47	31.414	-1.688	58.981	1.00	23.53	C
ATOM	480	C	ILE	A	47	33.995	-3.358	56.533	1.00	21.27	C
ATOM	481	O	ILE	A	47	34.105	-2.713	55.467	1.00	20.38	O
ATOM	482	N	LYS	A	48	34.964	-4.165	56.945	1.00	20.58	N
ATOM	484	CA	LYS	A	48	36.147	-4.350	56.101	1.00	20.25	C
ATOM	486	CB	LYS	A	48	37.159	-5.227	56.832	1.00	20.22	C
ATOM	489	CG	LYS	A	48	38.448	-5.482	56.101	1.00	23.83	C
ATOM	492	CD	LYS	A	48	39.194	-4.199	55.912	1.00	29.06	C
ATOM	495	CE	LYS	A	48	40.587	-4.417	55.480	1.00	33.23	C
ATOM	498	NZ	LYS	A	48	41.293	-3.094	55.609	1.00	33.67	N
ATOM	502	C	LYS	A	48	35.831	-5.000	54.712	1.00	19.15	C
ATOM	503	O	LYS	A	48	36.498	-4.708	53.699	1.00	19.86	O
ATOM	504	N	GLY	A	49	34.844	-5.883	54.683	1.00	20.05	N
ATOM	506	CA	GLY	A	49	34.400	-6.508	53.447	1.00	17.92	C
ATOM	509	C	GLY	A	49	33.745	-5.437	52.559	1.00	18.99	C
ATOM	510	O	GLY	A	49	33.893	-5.429	51.326	1.00	19.22	O
ATOM	511	N	HIS	A	50	32.957	-4.581	53.173	1.00	18.74	N
ATOM	513	CA	HIS	A	50	32.342	-3.461	52.438	1.00	19.52	C
ATOM	515	CB	HIS	A	50	31.375	-2.735	53.311	1.00	17.59	C
ATOM	518	CG	HIS	A	50	30.163	-3.527	53.641	1.00	19.24	C
ATOM	519	ND1	HIS	A	50	29.521	-4.346	52.737	1.00	17.54	N
ATOM	521	CE1	HIS	A	50	28.463	-4.883	53.323	1.00	19.19	C
ATOM	523	NE2	HIS	A	50	28.407	-4.455	54.574	1.00	18.01	N
ATOM	525	CD2	HIS	A	50	29.442	-3.591	54.786	1.00	20.18	C
ATOM	527	C	HIS	A	50	33.378	-2.508	51.829	1.00	19.62	C
ATOM	528	O	HIS	A	50	33.227	-2.031	50.701	1.00	18.48	O
ATOM	529	N	TYR	A	51	34.431	-2.199	52.583	1.00	20.02	N
ATOM	531	CA	TYR	A	51	35.546	-1.463	52.052	1.00	21.38	C
ATOM	533	CB	TYR	A	51	36.641	-1.240	53.138	1.00	23.20	C
ATOM	536	CG	TYR	A	51	37.748	-0.373	52.626	1.00	25.21	C
ATOM	537	CD1	TYR	A	51	38.788	-0.918	51.880	1.00	31.67	C
ATOM	539	CE1	TYR	A	51	39.775	-0.128	51.362	1.00	31.55	C
ATOM	541	CZ	TYR	A	51	39.712	1.239	51.537	1.00	32.74	C
ATOM	542	OH	TYR	A	51	40.725	2.015	50.992	1.00	36.21	O
ATOM	544	CE2	TYR	A	51	38.679	1.808	52.225	1.00	32.92	C
ATOM	546	CD2	TYR	A	51	37.685	1.005	52.761	1.00	29.03	C
ATOM	548	C	TYR	A	51	36.123	-2.105	50.806	1.00	21.19	C
ATOM	549	O	TYR	A	51	36.290	-1.461	49.769	1.00	21.07	O

Figure 5-8

ATOM	640	CD1	ILE	A	57	30.657	-0.576	44.434	1.00	21.39	C
ATOM	644	CG2	ILE	A	57	31.647	0.392	41.790	1.00	24.07	C
ATOM	648	C	ILE	A	57	34.008	-0.997	40.789	1.00	20.46	C
ATOM	649	O	ILE	A	57	33.617	-0.969	39.626	1.00	18.90	O
ATOM	650	N	LYS	A	58	35.211	-0.547	41.152	1.00	20.57	N
ATOM	652	CA	LYS	A	58	36.168	0.040	40.197	1.00	21.49	C
ATOM	654	CB	LYS	A	58	37.441	0.472	40.947	1.00	21.75	C
ATOM	657	CG	LYS	A	58	37.117	1.600	41.976	1.00	23.68	C
ATOM	660	CD	LYS	A	58	38.339	2.301	42.572	1.00	25.10	C
ATOM	663	CE	LYS	A	58	37.945	3.352	43.642	1.00	28.89	C
ATOM	666	NZ	LYS	A	58	38.859	3.440	44.858	1.00	24.42	N
ATOM	670	C	LYS	A	58	36.536	-0.938	39.117	1.00	22.38	C
ATOM	671	O	LYS	A	58	36.540	-0.646	37.898	1.00	22.61	O
ATOM	672	N	LYS	A	59	36.877	-2.121	39.575	1.00	21.83	N
ATOM	674	CA	LYS	A	59	37.333	-3.148	38.662	1.00	23.13	C
ATOM	676	CB	LYS	A	59	37.627	-4.438	39.403	1.00	22.24	C
ATOM	679	CG	LYS	A	59	38.792	-4.388	40.335	1.00	28.15	C
ATOM	682	CD	LYS	A	59	39.145	-5.776	40.848	1.00	31.71	C
ATOM	685	CE	LYS	A	59	40.139	-5.681	41.980	1.00	35.46	C
ATOM	688	NZ	LYS	A	59	40.432	-7.014	42.552	1.00	37.22	N
ATOM	692	C	LYS	A	59	36.267	-3.428	37.625	1.00	22.01	C
ATOM	693	O	LYS	A	59	36.534	-3.497	36.415	1.00	21.76	O
ATOM	694	N	ILE	A	60	35.050	-3.629	38.104	1.00	21.61	N
ATOM	696	CA	ILE	A	60	33.959	-4.029	37.208	1.00	20.73	C
ATOM	698	CB	ILE	A	60	32.793	-4.620	38.018	1.00	21.57	C
ATOM	700	CG1	ILE	A	60	33.300	-5.832	38.827	1.00	20.71	C
ATOM	703	CD1	ILE	A	60	34.249	-6.785	38.080	1.00	24.83	C
ATOM	707	CG2	ILE	A	60	31.725	-5.049	37.120	1.00	21.49	C
ATOM	711	C	ILE	A	60	33.527	-2.894	36.281	1.00	20.03	C
ATOM	712	O	ILE	A	60	33.157	-3.145	35.115	1.00	18.76	O
ATOM	713	N	THR	A	61	33.571	-1.664	36.784	1.00	19.70	N
ATOM	715	CA	THR	A	61	33.256	-0.497	35.991	1.00	20.75	C
ATOM	717	CB	THR	A	61	33.356	0.745	36.848	1.00	20.28	C
ATOM	719	OG1	THR	A	61	32.313	0.769	37.860	1.00	19.69	O
ATOM	721	CG2	THR	A	61	33.106	1.994	36.015	1.00	22.45	C
ATOM	725	C	THR	A	61	34.225	-0.419	34.808	1.00	20.83	C
ATOM	726	O	THR	A	61	33.845	-0.162	33.684	1.00	20.38	O
ATOM	727	N	ARG	A	62	35.500	-0.649	35.070	1.00	20.89	N
ATOM	729	CA	ARG	A	62	36.503	-0.580	34.014	1.00	20.61	C
ATOM	731	CB	ARG	A	62	37.900	-0.840	34.604	1.00	21.79	C
ATOM	734	CG	ARG	A	62	38.464	0.409	35.169	1.00	25.29	C
ATOM	737	CD	ARG	A	62	39.855	0.255	35.875	1.00	29.18	C
ATOM	740	NE	ARG	A	62	39.762	0.999	37.100	1.00	31.20	N
ATOM	742	CZ	ARG	A	62	40.565	0.906	38.119	1.00	38.16	C

Figure 5-9

ATOM	743	NH1	ARG	A	62	41.652	0.143	38.052	1.00	33.80	N
ATOM	746	NH2	ARG	A	62	40.281	1.604	39.216	1.00	39.36	N
ATOM	749	C	ARG	A	62	36.282	-1.572	32.914	1.00	20.18	C
ATOM	750	O	ARG	A	62	36.313	-1.205	31.711	1.00	21.54	O
ATOM	751	N	VAL	A	63	36.058	-2.817	33.294	1.00	17.83	N
ATOM	753	CA	VAL	A	63	35.911	-3.830	32.267	1.00	19.70	C
ATOM	755	CB	VAL	A	63	36.031	-5.289	32.804	1.00	20.08	C
ATOM	757	CG1	VAL	A	63	34.965	-5.592	33.788	1.00	24.62	C
ATOM	761	CG2	VAL	A	63	35.909	-6.270	31.685	1.00	21.24	C
ATOM	765	C	VAL	A	63	34.616	-3.598	31.507	1.00	18.94	C
ATOM	766	O	VAL	A	63	34.566	-3.781	30.281	1.00	19.67	O
ATOM	767	N	ALA	A	64	33.553	-3.229	32.210	1.00	19.11	N
ATOM	769	CA	ALA	A	64	32.294	-3.026	31.502	1.00	19.32	C
ATOM	771	CB	ALA	A	64	31.181	-2.696	32.458	1.00	18.08	C
ATOM	775	C	ALA	A	64	32.448	-1.887	30.453	1.00	19.80	C
ATOM	776	O	ALA	A	64	31.932	-1.998	29.348	1.00	19.72	O
ATOM	777	N	SER	A	65	33.136	-0.816	30.833	1.00	20.25	N
ATOM	779	CA	SER	A	65	33.369	0.299	29.929	1.00	21.02	C
ATOM	781	CB	SER	A	65	34.088	1.405	30.655	1.00	20.94	C
ATOM	784	OG	SER	A	65	34.286	2.541	29.848	1.00	21.89	O
ATOM	786	C	SER	A	65	34.231	-0.160	28.752	1.00	21.35	C
ATOM	787	O	SER	A	65	33.920	0.063	27.577	1.00	21.20	O
ATOM	788	N	ASP	A	66	35.325	-0.815	29.089	1.00	21.52	N
ATOM	790	CA	ASP	A	66	36.262	-1.292	28.091	1.00	22.65	C
ATOM	792	CB	ASP	A	66	37.432	-2.033	28.726	1.00	24.20	C
ATOM	795	CG	ASP	A	66	38.407	-1.104	29.403	1.00	25.17	C
ATOM	796	OD1	ASP	A	66	38.253	0.130	29.302	1.00	21.56	O
ATOM	797	OD2	ASP	A	66	39.356	-1.543	30.069	1.00	31.49	O
ATOM	798	C	ASP	A	66	35.626	-2.158	27.052	1.00	23.04	C
ATOM	799	O	ASP	A	66	36.025	-2.063	25.880	1.00	22.96	O
ATOM	800	N	ILE	A	67	34.668	-3.009	27.450	1.00	21.79	N
ATOM	802	CA	ILE	A	67	34.039	-3.932	26.503	1.00	21.75	C
ATOM	804	CB	ILE	A	67	33.806	-5.344	27.057	1.00	21.66	C
ATOM	806	CG1	ILE	A	67	32.605	-5.380	28.014	1.00	20.81	C
ATOM	809	CD1	ILE	A	67	32.303	-6.726	28.495	1.00	22.15	C
ATOM	813	CG2	ILE	A	67	35.045	-5.818	27.689	1.00	25.43	C
ATOM	817	C	ILE	A	67	32.768	-3.394	25.870	1.00	21.24	C
ATOM	818	O	ILE	A	67	32.251	-4.030	24.983	1.00	22.40	O
ATOM	819	N	GLY	A	68	32.316	-2.220	26.269	1.00	21.62	N
ATOM	821	CA	GLY	A	68	31.168	-1.620	25.602	1.00	20.70	C
ATOM	824	C	GLY	A	68	29.812	-2.051	26.108	1.00	20.05	C
ATOM	825	O	GLY	A	68	28.831	-2.057	25.365	1.00	19.84	O
ATOM	826	N	VAL	A	69	29.747	-2.414	27.385	1.00	19.04	N
ATOM	828	CA	VAL	A	69	28.448	-2.578	28.050	1.00	18.11	C
ATOM	830	CB	VAL	A	69	28.654	-3.171	29.472	1.00	17.55	C

Figure 5-10

ATOM	832	CG1	VAL	A	69	27.365	-3.166	30.238	1.00	21.25	C
ATOM	836	CG2	VAL	A	69	29.117	-4.560	29.333	1.00	16.23	C
ATOM	840	C	VAL	A	69	27.869	-1.170	28.126	1.00	17.53	C
ATOM	841	O	VAL	A	69	28.600	-0.229	28.420	1.00	16.17	O
ATOM	842	N	LYS	A	70	26.565	-0.986	27.870	1.00	17.03	N
ATOM	844	CA	LYS	A	70	25.990	0.330	27.868	1.00	17.68	C
ATOM	846	CB	LYS	A	70	24.787	0.396	26.905	1.00	18.18	C
ATOM	849	CG	LYS	A	70	25.173	0.364	25.440	1.00	23.63	C
ATOM	852	CD	LYS	A	70	23.921	0.385	24.541	1.00	25.28	C
ATOM	855	CE	LYS	A	70	23.213	1.718	24.608	1.00	28.59	C
ATOM	858	NZ	LYS	A	70	22.089	1.804	23.568	1.00	27.22	N
ATOM	862	C	LYS	A	70	25.504	0.768	29.237	1.00	16.44	C
ATOM	863	O	LYS	A	70	25.515	1.943	29.561	1.00	16.39	O
ATOM	864	N	TYR	A	71	24.987	-0.186	30.012	1.00	15.99	N
ATOM	866	CA	TYR	A	71	24.389	0.092	31.286	1.00	13.64	C
ATOM	868	CB	TYR	A	71	22.864	-0.016	31.243	1.00	13.38	C
ATOM	871	CG	TYR	A	71	22.176	0.831	30.187	1.00	15.04	C
ATOM	872	CD1	TYR	A	71	21.709	2.107	30.470	1.00	19.24	C
ATOM	874	CE1	TYR	A	71	21.042	2.887	29.465	1.00	22.92	C
ATOM	876	CZ	TYR	A	71	20.852	2.351	28.209	1.00	23.07	C
ATOM	877	OH	TYR	A	71	20.200	3.073	27.177	1.00	21.31	O
ATOM	879	CE2	TYR	A	71	21.301	1.087	27.927	1.00	18.70	C
ATOM	881	CD2	TYR	A	71	21.960	0.326	28.918	1.00	18.76	C
ATOM	883	C	TYR	A	71	24.833	-0.967	32.323	1.00	14.00	C
ATOM	884	O	TYR	A	71	24.789	-2.143	32.048	1.00	15.15	O
ATOM	885	N	LEU	A	72	25.203	-0.493	33.474	1.00	14.79	N
ATOM	887	CA	LEU	A	72	25.620	-1.384	34.603	1.00	15.38	C
ATOM	889	CB	LEU	A	72	27.155	-1.365	34.766	1.00	15.93	C
ATOM	892	CG	LEU	A	72	27.686	-2.247	35.868	1.00	14.79	C
ATOM	894	CD1	LEU	A	72	27.526	-3.712	35.523	1.00	14.36	C
ATOM	898	CD2	LEU	A	72	29.202	-2.032	36.142	1.00	18.01	C
ATOM	902	C	LEU	A	72	24.931	-0.960	35.892	1.00	15.86	C
ATOM	903	O	LEU	A	72	25.231	0.084	36.455	1.00	16.66	O
ATOM	904	N	THR	A	73	23.964	-1.776	36.356	1.00	15.81	N
ATOM	906	CA	THR	A	73	23.224	-1.464	37.555	1.00	14.39	C
ATOM	908	CB	THR	A	73	21.767	-1.774	37.395	1.00	15.50	C
ATOM	910	OG1	THR	A	73	21.249	-1.000	36.299	1.00	14.06	O
ATOM	912	CG2	THR	A	73	20.944	-1.402	38.678	1.00	14.52	C
ATOM	916	C	THR	A	73	23.782	-2.297	38.688	1.00	15.32	C
ATOM	917	O	THR	A	73	23.843	-3.528	38.576	1.00	14.47	O
ATOM	918	N	LEU	A	74	24.143	-1.600	39.751	1.00	15.03	N
ATOM	920	CA	LEU	A	74	24.764	-2.282	40.910	1.00	15.88	C
ATOM	922	CB	LEU	A	74	26.130	-1.681	41.280	1.00	15.98	C
ATOM	925	CG	LEU	A	74	27.192	-1.726	40.196	1.00	16.71	C

Figure 5-11

ATOM	927	CD1	LEU	A	74	28.559	-1.265	40.658	1.00	17.37	C
ATOM	931	CD2	LEU	A	74	27.273	-3.143	39.743	1.00	19.75	C
ATOM	935	C	LEU	A	74	23.852	-2.140	42.104	1.00	16.01	C
ATOM	936	O	LEU	A	74	23.494	-1.022	42.471	1.00	15.64	O
ATOM	937	N	TYR	A	75	23.457	-3.249	42.736	1.00	14.70	N
ATOM	939	CA	TYR	A	75	22.548	-3.202	43.883	1.00	16.58	C
ATOM	941	CB	TYR	A	75	21.901	-4.551	44.152	1.00	15.63	C
ATOM	944	CG	TYR	A	75	20.576	-4.623	44.937	1.00	16.83	C
ATOM	945	CD1	TYR	A	75	19.831	-3.502	45.300	1.00	18.35	C
ATOM	947	CE1	TYR	A	75	18.603	-3.631	45.966	1.00	21.86	C
ATOM	949	CZ	TYR	A	75	18.117	-4.871	46.249	1.00	19.55	C
ATOM	950	OH	TYR	A	75	16.909	-5.126	46.888	1.00	21.64	O
ATOM	952	CE2	TYR	A	75	18.835	-5.976	45.894	1.00	18.56	C
ATOM	954	CD2	TYR	A	75	20.064	-5.859	45.274	1.00	18.57	C
ATOM	956	C	TYR	A	75	23.408	-2.865	45.094	1.00	18.35	C
ATOM	957	O	TYR	A	75	24.081	-3.774	45.598	1.00	21.45	O
ATOM	958	N	ALA	A	76	23.349	-1.626	45.568	1.00	17.47	N
ATOM	960	CA	ALA	A	76	24.237	-1.160	46.630	1.00	17.29	C
ATOM	962	CB	ALA	A	76	24.783	0.207	46.319	1.00	17.97	C
ATOM	966	C	ALA	A	76	23.597	-1.180	48.002	1.00	17.82	C
ATOM	967	O	ALA	A	76	24.307	-1.474	48.975	1.00	17.78	O
ATOM	968	N	PHE	A	77	22.269	-0.965	48.089	1.00	14.95	N
ATOM	970	CA	PHE	A	77	21.591	-0.962	49.386	1.00	16.76	C
ATOM	972	CB	PHE	A	77	21.999	0.288	50.180	1.00	16.07	C
ATOM	975	CG	PHE	A	77	21.581	0.273	51.593	1.00	18.45	C
ATOM	976	CD1	PHE	A	77	20.294	0.627	51.953	1.00	17.72	C
ATOM	978	CE1	PHE	A	77	19.886	0.627	53.271	1.00	19.47	C
ATOM	980	CZ	PHE	A	77	20.751	0.246	54.243	1.00	19.89	C
ATOM	982	CE2	PHE	A	77	22.064	-0.111	53.912	1.00	18.12	C
ATOM	984	CD2	PHE	A	77	22.483	-0.077	52.585	1.00	19.62	C
ATOM	986	C	PHE	A	77	20.100	-1.034	49.128	1.00	16.03	C
ATOM	987	O	PHE	A	77	19.526	-0.190	48.427	1.00	17.01	O
ATOM	988	N	SER	A	78	19.442	-2.035	49.690	1.00	18.21	N
ATOM	990	CA	SER	A	78	18.009	-2.216	49.400	1.00	17.11	C
ATOM	992	CB	SER	A	78	17.671	-3.697	49.392	1.00	19.17	C
ATOM	995	OG	SER	A	78	17.498	-4.134	50.718	1.00	21.44	O
ATOM	997	C	SER	A	78	17.122	-1.576	50.446	1.00	18.07	C
ATOM	998	O	SER	A	78	17.583	-1.198	51.498	1.00	17.28	O
ATOM	999	N	THR	A	79	15.842	-1.453	50.137	1.00	18.20	N
ATOM	1001	CA	THR	A	79	14.891	-0.959	51.135	1.00	18.68	C
ATOM	1003	CB	THR	A	79	13.508	-0.777	50.515	1.00	19.32	C
ATOM	1005	OG1	THR	A	79	13.198	-1.906	49.667	1.00	19.77	O
ATOM	1007	CG2	THR	A	79	13.484	0.458	49.606	1.00	20.90	C
ATOM	1011	C	THR	A	79	14.831	-1.868	52.370	1.00	18.45	C
ATOM	1012	O	THR	A	79	14.411	-1.422	53.413	1.00	20.07	O

Figure 5-12

ATOM	1013	N	GLU A	80	15.232	-3.132	52.297	1.00	16.77	N
ATOM	1015	CA	GLU A	80	15.239	-4.004	53.474	1.00	17.60	C
ATOM	1017	CB	GLU A	80	14.888	-5.505	53.105	1.00	15.95	C
ATOM	1020	CG	GLU A	80	13.447	-5.739	52.619	1.00	18.53	C
ATOM	1023	CD	GLU A	80	13.143	-5.022	51.308	1.00	16.51	C
ATOM	1024	OE1	GLU A	80	13.816	-5.370	50.301	1.00	17.78	O
ATOM	1025	OE2	GLU A	80	12.355	-4.034	51.296	1.00	17.75	O
ATOM	1026	C	GLU A	80	16.559	-3.985	54.290	1.00	17.37	C
ATOM	1027	O	GLU A	80	16.619	-4.569	55.413	1.00	17.97	O
ATOM	1028	N	ASN A	81	17.617	-3.381	53.762	1.00	17.67	N
ATOM	1030	CA	ASN A	81	18.936	-3.371	54.443	1.00	17.55	C
ATOM	1032	CB	ASN A	81	20.103	-3.062	53.509	1.00	17.73	C
ATOM	1035	CG	ASN A	81	20.401	-4.194	52.456	1.00	16.56	C
ATOM	1036	OD1	ASN A	81	20.814	-3.888	51.393	1.00	16.65	O
ATOM	1037	ND2	ASN A	81	20.196	-5.477	52.795	1.00	14.21	N
ATOM	1040	C	ASN A	81	19.031	-2.428	55.653	1.00	19.21	C
ATOM	1041	O	ASN A	81	20.013	-2.492	56.404	1.00	19.28	O
ATOM	1042	N	TRP A	82	18.037	-1.570	55.826	1.00	20.09	N
ATOM	1044	CA	TRP A	82	17.942	-0.713	56.998	1.00	21.65	C
ATOM	1046	CB	TRP A	82	16.757	0.247	56.847	1.00	22.61	C
ATOM	1049	CG	TRP A	82	16.872	1.234	55.712	1.00	23.06	C
ATOM	1050	CD1	TRP A	82	16.205	1.205	54.539	1.00	22.96	C
ATOM	1052	NE1	TRP A	82	16.567	2.278	53.758	1.00	24.72	N
ATOM	1054	CE2	TRP A	82	17.483	3.022	54.438	1.00	26.44	C
ATOM	1055	CD2	TRP A	82	17.703	2.388	55.666	1.00	23.78	C
ATOM	1056	CE3	TRP A	82	18.613	2.973	56.554	1.00	24.76	C
ATOM	1058	CZ3	TRP A	82	19.252	4.128	56.177	1.00	24.12	C
ATOM	1060	CH2	TRP A	82	19.024	4.709	54.964	1.00	25.54	C
ATOM	1062	CZ2	TRP A	82	18.142	4.191	54.077	1.00	25.51	C
ATOM	1064	C	TRP A	82	17.762	-1.539	58.274	1.00	23.03	C
ATOM	1065	O	TRP A	82	17.963	-1.030	59.347	1.00	24.27	O
ATOM	1066	N	SER A	83	17.349	-2.798	58.179	1.00	24.22	N
ATOM	1068	CA	SER A	83	17.230	-3.623	59.385	1.00	25.70	C
ATOM	1070	CB	SER A	83	16.395	-4.868	59.078	1.00	27.16	C
ATOM	1073	OG	SER A	83	17.102	-5.692	58.158	1.00	28.89	O
ATOM	1075	C	SER A	83	18.606	-4.036	59.972	1.00	24.61	C
ATOM	1076	O	SER A	83	18.648	-4.658	61.059	1.00	25.58	O
ATOM	1077	N	ARG A	84	19.681	-3.728	59.262	1.00	22.35	N
ATOM	1079	CA	ARG A	84	21.026	-4.101	59.705	1.00	21.32	C
ATOM	1081	CB	ARG A	84	22.041	-4.102	58.537	1.00	20.99	C
ATOM	1084	CG	ARG A	84	21.844	-5.244	57.526	1.00	19.61	C
ATOM	1087	CD	ARG A	84	22.802	-5.157	56.378	1.00	18.70	C
ATOM	1090	NE	ARG A	84	22.552	-6.241	55.414	1.00	19.86	N
ATOM	1092	CZ	ARG A	84	23.442	-6.673	54.550	1.00	17.63	C

Figure 5-13

ATOM	1093	NH1	ARG	A	84	24.667	-6.196	54.556	1.00	18.00	N
ATOM	1096	NH2	ARG	A	84	23.147	-7.648	53.692	1.00	20.96	N
ATOM	1099	C	ARG	A	84	21.522	-3.153	60.807	1.00	21.21	C
ATOM	1100	O	ARG	A	84	20.951	-2.086	61.003	1.00	20.73	O
ATOM	1101	N	PRO	A	85	22.550	-3.546	61.538	1.00	22.18	N
ATOM	1102	CA	PRO	A	85	23.034	-2.685	62.619	1.00	22.16	C
ATOM	1104	CB	PRO	A	85	24.250	-3.446	63.130	1.00	23.56	C
ATOM	1107	CG	PRO	A	85	23.972	-4.882	62.831	1.00	22.89	C
ATOM	1110	CD	PRO	A	85	23.377	-4.752	61.418	1.00	22.00	C
ATOM	1113	C	PRO	A	85	23.441	-1.288	62.153	1.00	22.39	C
ATOM	1114	O	PRO	A	85	24.030	-1.060	61.143	1.00	20.13	O
ATOM	1115	N	GLU	A	86	23.187	-0.324	63.005	1.00	24.30	N
ATOM	1117	CA	GLU	A	86	23.511	1.067	62.699	1.00	23.98	C
ATOM	1119	CB	GLU	A	86	23.334	1.857	63.976	1.00	24.00	C
ATOM	1122	CG	GLU	A	86	23.624	3.342	63.893	1.00	29.54	C
ATOM	1125	CD	GLU	A	86	23.584	3.937	65.297	1.00	32.02	C
ATOM	1126	OE1	GLU	A	86	24.590	3.778	66.079	1.00	29.40	O
ATOM	1127	OE2	GLU	A	86	22.490	4.437	65.628	1.00	34.55	O
ATOM	1128	C	GLU	A	86	24.920	1.291	62.153	1.00	23.58	C
ATOM	1129	O	GLU	A	86	25.090	1.961	61.141	1.00	23.88	O
ATOM	1130	N	SER	A	87	25.937	0.775	62.829	1.00	23.07	N
ATOM	1132	CA	SER	A	87	27.306	0.949	62.389	1.00	22.78	C
ATOM	1134	CB	SER	A	87	28.274	0.237	63.350	1.00	23.67	C
ATOM	1137	OG	SER	A	87	28.068	-1.146	63.296	1.00	23.70	O
ATOM	1139	C	SER	A	87	27.566	0.511	60.933	1.00	22.94	C
ATOM	1140	O	SER	A	87	28.359	1.122	60.223	1.00	22.02	O
ATOM	1141	N	GLU	A	88	26.941	-0.588	60.520	1.00	22.60	N
ATOM	1143	CA	GLU	A	88	27.121	-1.091	59.147	1.00	22.11	C
ATOM	1145	CB	GLU	A	88	26.623	-2.542	58.996	1.00	21.88	C
ATOM	1148	CG	GLU	A	88	26.869	-3.147	57.605	1.00	21.65	C
ATOM	1151	CD	GLU	A	88	26.532	-4.625	57.520	1.00	25.86	C
ATOM	1152	OE1	GLU	A	88	26.358	-5.247	58.585	1.00	24.26	O
ATOM	1153	OE2	GLU	A	88	26.471	-5.205	56.388	1.00	19.30	O
ATOM	1154	C	GLU	A	88	26.372	-0.186	58.165	1.00	22.26	C
ATOM	1155	O	GLU	A	88	26.919	0.140	57.114	1.00	21.18	O
ATOM	1156	N	VAL	A	89	25.162	0.230	58.515	1.00	21.07	N
ATOM	1158	CA	VAL	A	89	24.408	1.161	57.694	1.00	23.74	C
ATOM	1160	CB	VAL	A	89	23.058	1.403	58.334	1.00	23.03	C
ATOM	1162	CG1	VAL	A	89	22.206	2.384	57.526	1.00	24.51	C
ATOM	1166	CG2	VAL	A	89	22.261	0.087	58.457	1.00	22.42	C
ATOM	1170	C	VAL	A	89	25.152	2.499	57.546	1.00	24.83	C
ATOM	1171	O	VAL	A	89	25.322	3.007	56.448	1.00	24.78	O
ATOM	1172	N	ASN	A	90	25.687	3.007	58.660	1.00	26.25	N
ATOM	1174	CA	ASN	A	90	26.350	4.291	58.636	1.00	26.99	C
ATOM	1176	CB	ASN	A	90	26.797	4.740	60.022	1.00	27.71	C

Figure 5-14

ATOM	1179	CG	ASN A	90	25.676	5.263	60.867	1.00	30.18	C
ATOM	1180	OD1	ASN A	90	24.614	5.663	60.356	1.00	33.31	O
ATOM	1181	ND2	ASN A	90	25.904	5.306	62.183	1.00	27.81	N
ATOM	1184	C	ASN A	90	27.536	4.110	57.758	1.00	26.87	C
ATOM	1185	O	ASN A	90	27.855	4.975	56.959	1.00	25.31	O
ATOM	1186	N	TYR A	91	28.271	3.009	57.956	1.00	26.49	N
ATOM	1188	CA	TYR A	91	29.434	2.730	57.146	1.00	26.11	C
ATOM	1190	CB	TYR A	91	30.234	1.493	57.657	1.00	25.85	C
ATOM	1193	CG	TYR A	91	31.620	1.359	57.048	1.00	23.96	C
ATOM	1194	CD1	TYR A	91	32.716	2.048	57.590	1.00	26.70	C
ATOM	1196	CE1	TYR A	91	34.001	1.932	57.046	1.00	24.19	C
ATOM	1198	CZ	TYR A	91	34.218	1.117	56.002	1.00	22.80	C
ATOM	1199	OH	TYR A	91	35.500	1.022	55.497	1.00	23.89	O
ATOM	1201	CE2	TYR A	91	33.155	0.402	55.428	1.00	22.32	C
ATOM	1203	CD2	TYR A	91	31.869	0.504	56.002	1.00	22.45	C
ATOM	1205	C	TYR A	91	29.194	2.629	55.637	1.00	26.38	C
ATOM	1206	O	TYR A	91	29.934	3.189	54.870	1.00	26.36	O
ATOM	1207	N	ILE A	92	28.228	1.824	55.238	1.00	25.66	N
ATOM	1209	CA	ILE A	92	27.926	1.673	53.827	1.00	26.12	C
ATOM	1211	CB	ILE A	92	26.759	0.695	53.647	1.00	25.25	C
ATOM	1213	CG1	ILE A	92	27.172	-0.739	54.034	1.00	25.39	C
ATOM	1216	CD1	ILE A	92	26.034	-1.733	54.271	1.00	27.13	C
ATOM	1220	CG2	ILE A	92	26.323	0.755	52.151	1.00	24.60	C
ATOM	1224	C	ILE A	92	27.565	3.032	53.214	1.00	27.59	C
ATOM	1225	O	ILE A	92	28.082	3.406	52.132	1.00	28.45	O
ATOM	1226	N	MET A	93	26.732	3.760	53.931	1.00	30.11	N
ATOM	1228	CA	MET A	93	26.186	5.045	53.468	1.00	31.68	C
ATOM	1230	CB	MET A	93	25.097	5.529	54.407	1.00	31.81	C
ATOM	1233	CG	MET A	93	23.843	4.723	54.373	1.00	33.79	C
ATOM	1236	SE	MET A	93	22.946	5.208	52.683	1.00	37.35	SE
ATOM	1237	CE	MET A	93	21.512	3.775	52.713	1.00	37.93	C
ATOM	1241	C	MET A	93	27.268	6.103	53.334	1.00	33.11	C
ATOM	1242	O	MET A	93	27.130	7.058	52.563	1.00	31.09	O
ATOM	1243	N	ASN A	94	28.370	5.939	54.063	1.00	34.42	N
ATOM	1245	CA	ASN A	94	29.420	6.920	53.971	1.00	35.78	C
ATOM	1247	CB	ASN A	94	30.018	7.168	55.342	1.00	36.88	C
ATOM	1250	CG	ASN A	94	29.940	8.622	55.706	1.00	40.75	C
ATOM	1251	OD1	ASN A	94	28.899	9.097	56.232	1.00	44.24	O
ATOM	1252	ND2	ASN A	94	30.994	9.371	55.360	1.00	39.41	N
ATOM	1255	C	ASN A	94	30.473	6.588	52.930	1.00	35.56	C
ATOM	1256	O	ASN A	94	31.221	7.471	52.511	1.00	36.62	O
ATOM	1257	N	LEU A	95	30.462	5.354	52.428	1.00	35.16	N
ATOM	1259	CA	LEU A	95	31.441	4.919	51.451	1.00	35.20	C
ATOM	1261	CB	LEU A	95	31.307	3.426	51.164	1.00	35.67	C

Figure 5-15

ATOM	1264	CG	LEU	A	95	31.880	2.412	52.174	1.00	35.50	C
ATOM	1266	CD1	LEU	A	95	31.653	0.979	51.681	1.00	36.67	C
ATOM	1270	CD2	LEU	A	95	33.372	2.628	52.370	1.00	37.30	C
ATOM	1274	C	LEU	A	95	31.449	5.687	50.111	1.00	35.38	C
ATOM	1275	O	LEU	A	95	32.501	5.823	49.492	1.00	33.83	O
ATOM	1276	N	PRO	A	96	30.296	6.125	49.616	1.00	34.73	N
ATOM	1277	CA	PRO	A	96	30.272	6.799	48.314	1.00	35.25	C
ATOM	1279	CB	PRO	A	96	28.799	7.177	48.139	1.00	34.92	C
ATOM	1282	CG	PRO	A	96	28.068	6.178	48.960	1.00	34.51	C
ATOM	1285	CD	PRO	A	96	28.950	5.973	50.180	1.00	35.30	C
ATOM	1288	C	PRO	A	96	31.169	8.019	48.233	1.00	36.21	C
ATOM	1289	O	PRO	A	96	31.757	8.235	47.167	1.00	36.04	O
ATOM	1290	N	VAL	A	97	31.255	8.788	49.308	1.00	36.88	N
ATOM	1292	CA	VAL	A	97	32.101	9.980	49.350	1.00	38.78	C
ATOM	1294	CB	VAL	A	97	32.215	10.503	50.772	1.00	38.85	C
ATOM	1296	CG1	VAL	A	97	32.949	11.806	50.794	1.00	41.28	C
ATOM	1300	CG2	VAL	A	97	30.821	10.670	51.450	1.00	39.81	C
ATOM	1304	C	VAL	A	97	33.509	9.648	48.838	1.00	39.33	C
ATOM	1305	O	VAL	A	97	34.075	10.300	47.956	1.00	40.53	O
ATOM	1306	N	ASN	A	98	34.030	8.539	49.307	1.00	39.52	N
ATOM	1308	CA	ASN	A	98	35.391	8.178	49.015	1.00	39.90	C
ATOM	1310	CB	ASN	A	98	35.870	7.452	50.247	1.00	40.81	C
ATOM	1313	CG	ASN	A	98	35.556	8.273	51.475	1.00	44.06	C
ATOM	1314	OD1	ASN	A	98	36.192	9.333	51.681	1.00	49.41	O
ATOM	1315	ND2	ASN	A	98	34.485	7.886	52.226	1.00	43.40	N
ATOM	1318	C	ASN	A	98	35.582	7.403	47.764	1.00	38.44	C
ATOM	1319	O	ASN	A	98	36.620	7.523	47.099	1.00	38.84	O
ATOM	1320	N	PHE	A	99	34.580	6.623	47.428	1.00	36.20	N
ATOM	1322	CA	PHE	A	99	34.615	5.957	46.175	1.00	35.85	C
ATOM	1324	CB	PHE	A	99	33.336	5.128	45.990	1.00	35.17	C
ATOM	1327	CG	PHE	A	99	33.178	4.571	44.616	1.00	35.66	C
ATOM	1328	CD1	PHE	A	99	33.846	3.419	44.250	1.00	34.98	C
ATOM	1330	CE1	PHE	A	99	33.730	2.904	43.010	1.00	35.99	C
ATOM	1332	CZ	PHE	A	99	32.918	3.526	42.078	1.00	38.11	C
ATOM	1334	CE2	PHE	A	99	32.222	4.681	42.424	1.00	36.09	C
ATOM	1336	CD2	PHE	A	99	32.360	5.194	43.696	1.00	37.89	C
ATOM	1338	C	PHE	A	99	34.709	7.136	45.160	1.00	34.75	C
ATOM	1339	O	PHE	A	99	35.593	7.179	44.313	1.00	34.21	O
ATOM	1340	N	LEU	A	100	33.828	8.113	45.310	1.00	35.01	N
ATOM	1342	CA	LEU	A	100	33.738	9.201	44.320	1.00	35.68	C
ATOM	1344	CB	LEU	A	100	32.422	9.959	44.476	1.00	35.41	C
ATOM	1347	CG	LEU	A	100	31.179	9.074	44.274	1.00	35.54	C
ATOM	1349	CD1	LEU	A	100	29.890	9.879	44.385	1.00	37.75	C
ATOM	1353	CD2	LEU	A	100	31.228	8.346	42.916	1.00	37.40	C
ATOM	1357	C	LEU	A	100	34.964	10.121	44.294	1.00	36.47	C

Figure 5-16

ATOM	1358	O	LEU	A	100	35.505	10.414	43.239	1.00	35.38	O
ATOM	1359	N	LYS	A	101	35.422	10.566	45.453	1.00	38.08	N
ATOM	1361	CA	LYS	A	101	36.613	11.385	45.505	1.00	39.49	C
ATOM	1363	CB	LYS	A	101	36.953	11.725	46.965	1.00	41.05	C
ATOM	1366	CG	LYS	A	101	38.052	12.792	47.144	1.00	46.37	C
ATOM	1369	CD	LYS	A	101	38.519	12.864	48.609	1.00	52.03	C
ATOM	1372	CE	LYS	A	101	39.692	13.872	48.803	1.00	55.75	C
ATOM	1375	NZ	LYS	A	101	40.146	13.948	50.243	1.00	58.06	N
ATOM	1379	C	LYS	A	101	37.805	10.732	44.765	1.00	38.27	C
ATOM	1380	O	LYS	A	101	38.451	11.388	43.953	1.00	39.84	O
ATOM	1381	N	THR	A	102	38.092	9.455	44.941	1.00	36.74	N
ATOM	1383	CA	THR	A	102	39.264	8.915	44.254	1.00	36.55	C
ATOM	1385	CB	THR	A	102	39.823	7.648	44.929	1.00	36.57	C
ATOM	1387	OG1	THR	A	102	38.801	6.616	45.033	1.00	36.64	O
ATOM	1389	CG2	THR	A	102	40.258	7.939	46.358	1.00	38.30	C
ATOM	1393	C	THR	A	102	39.004	8.553	42.809	1.00	35.68	C
ATOM	1394	O	THR	A	102	39.934	8.514	41.998	1.00	36.33	O
ATOM	1395	N	PHE	A	103	37.745	8.300	42.483	1.00	34.11	N
ATOM	1397	CA	PHE	A	103	37.454	7.664	41.214	1.00	33.19	C
ATOM	1399	CB	PHE	A	103	36.614	6.414	41.480	1.00	34.10	C
ATOM	1402	CG	PHE	A	103	36.671	5.382	40.390	1.00	34.47	C
ATOM	1403	CD1	PHE	A	103	37.854	4.826	39.992	1.00	36.53	C
ATOM	1405	CE1	PHE	A	103	37.872	3.863	39.008	1.00	40.08	C
ATOM	1407	CZ	PHE	A	103	36.678	3.450	38.446	1.00	38.01	C
ATOM	1409	CE2	PHE	A	103	35.516	4.007	38.885	1.00	37.20	C
ATOM	1411	CD2	PHE	A	103	35.528	4.952	39.827	1.00	36.15	C
ATOM	1413	C	PHE	A	103	36.775	8.603	40.216	1.00	31.94	C
ATOM	1414	O	PHE	A	103	36.721	8.266	39.051	1.00	31.23	O
ATOM	1415	N	LEU	A	104	36.406	9.788	40.673	1.00	31.41	N
ATOM	1417	CA	LEU	A	104	35.717	10.795	39.830	1.00	31.88	C
ATOM	1419	CB	LEU	A	104	35.388	12.069	40.600	1.00	32.95	C
ATOM	1422	CG	LEU	A	104	33.911	12.495	40.531	1.00	35.86	C
ATOM	1424	CD1	LEU	A	104	33.784	13.934	40.903	1.00	36.79	C
ATOM	1428	CD2	LEU	A	104	33.241	12.231	39.177	1.00	36.09	C
ATOM	1432	C	LEU	A	104	36.534	11.128	38.590	1.00	30.87	C
ATOM	1433	O	LEU	A	104	36.023	11.056	37.450	1.00	28.96	O
ATOM	1434	N	PRO	A	105	37.806	11.477	38.770	1.00	29.71	N
ATOM	1435	CA	PRO	A	105	38.665	11.720	37.613	1.00	28.88	C
ATOM	1437	CB	PRO	A	105	40.059	11.946	38.257	1.00	29.75	C
ATOM	1440	CG	PRO	A	105	39.769	12.486	39.568	1.00	29.64	C
ATOM	1443	CD	PRO	A	105	38.540	11.700	40.031	1.00	30.70	C
ATOM	1446	C	PRO	A	105	38.673	10.573	36.597	1.00	27.43	C
ATOM	1447	O	PRO	A	105	38.556	10.861	35.417	1.00	28.39	O
ATOM	1448	N	GLU	A	106	38.747	9.305	37.001	1.00	25.67	N
ATOM	1450	CA	GLU	A	106	38.785	8.205	36.013	1.00	26.46	C

Figure 5-17

ATOM	1452	CB	GLU A 106	39.266	6.879	36.672	1.00	25.85	C
ATOM	1455	CG	GLU A 106	39.073	5.636	35.844	1.00	30.43	C
ATOM	1458	CD	GLU A 106	39.977	4.441	36.192	1.00	34.88	C
ATOM	1459	OE1	GLU A 106	40.864	4.496	37.074	1.00	36.21	O
ATOM	1460	OE2	GLU A 106	39.825	3.406	35.511	1.00	40.24	O
ATOM	1461	C	GLU A 106	37.404	8.032	35.324	1.00	24.80	C
ATOM	1462	O	GLU A 106	37.334	7.772	34.127	1.00	24.07	O
ATOM	1463	N	LEU A 107	36.334	8.145	36.096	1.00	24.94	N
ATOM	1465	CA	LEU A 107	34.948	8.088	35.524	1.00	24.81	C
ATOM	1467	CB	LEU A 107	33.924	8.368	36.621	1.00	24.88	C
ATOM	1470	CG	LEU A 107	33.811	7.256	37.699	1.00	26.06	C
ATOM	1472	CD1	LEU A 107	32.865	7.552	38.865	1.00	26.08	C
ATOM	1476	CD2	LEU A 107	33.324	6.004	36.961	1.00	29.26	C
ATOM	1480	C	LEU A 107	34.816	9.131	34.399	1.00	25.29	C
ATOM	1481	O	LEU A 107	34.265	8.873	33.353	1.00	23.92	O
ATOM	1482	N	ILE A 108	35.325	10.312	34.667	1.00	26.19	N
ATOM	1484	CA	ILE A 108	35.282	11.404	33.730	1.00	26.70	C
ATOM	1486	CB	ILE A 108	35.719	12.695	34.378	1.00	26.11	C
ATOM	1488	CG1	ILE A 108	34.633	13.218	35.308	1.00	28.10	C
ATOM	1491	CD1	ILE A 108	35.006	14.376	36.181	1.00	26.75	C
ATOM	1495	CG2	ILE A 108	36.100	13.729	33.269	1.00	28.26	C
ATOM	1499	C	ILE A 108	36.150	11.095	32.532	1.00	27.93	C
ATOM	1500	O	ILE A 108	35.690	11.244	31.419	1.00	28.01	O
ATOM	1501	N	GLU A 109	37.358	10.592	32.755	1.00	28.79	N
ATOM	1503	CA	GLU A 109	38.247	10.227	31.684	1.00	29.48	C
ATOM	1505	CB	GLU A 109	39.625	9.847	32.280	1.00	31.35	C
ATOM	1508	CG	GLU A 109	40.759	9.600	31.279	1.00	35.99	C
ATOM	1511	CD	GLU A 109	42.077	9.229	31.976	1.00	42.41	C
ATOM	1512	OE1	GLU A 109	42.341	9.728	33.101	1.00	47.32	O
ATOM	1513	OE2	GLU A 109	42.856	8.425	31.432	1.00	49.04	O
ATOM	1514	C	GLU A 109	37.683	9.067	30.845	1.00	28.39	C
ATOM	1515	O	GLU A 109	37.868	9.028	29.639	1.00	27.13	O
ATOM	1516	N	LYS A 110	36.970	8.143	31.485	1.00	25.35	N
ATOM	1518	CA	LYS A 110	36.445	6.977	30.798	1.00	26.04	C
ATOM	1520	CB	LYS A 110	36.351	5.790	31.761	1.00	26.97	C
ATOM	1523	CG	LYS A 110	37.677	5.124	32.092	1.00	31.06	C
ATOM	1526	CD	LYS A 110	37.448	3.631	32.465	1.00	33.34	C
ATOM	1529	CE	LYS A 110	38.595	2.769	32.003	1.00	38.02	C
ATOM	1532	NZ	LYS A 110	39.912	3.292	32.530	1.00	39.14	N
ATOM	1536	C	LYS A 110	35.043	7.271	30.159	1.00	24.90	C
ATOM	1537	O	LYS A 110	34.414	6.392	29.595	1.00	23.07	O
ATOM	1538	N	ASN A 111	34.612	8.517	30.262	1.00	24.73	N
ATOM	1540	CA	ASN A 111	33.367	8.996	29.640	1.00	24.74	C
ATOM	1542	CB	ASN A 111	33.472	8.888	28.117	1.00	24.86	C
ATOM	1545	CG	ASN A 111	32.262	9.517	27.366	1.00	25.57	C
ATOM	1546	OD1	ASN A 111	31.633	10.456	27.839	1.00	25.66	O

Figure 5-18

ATOM	1547	ND2	ASN	A	111	31.953	8.968	26.199	1.00	25.94	N
ATOM	1550	C	ASN	A	111	32.165	8.237	30.215	1.00	23.43	C
ATOM	1551	O	ASN	A	111	31.228	7.935	29.486	1.00	22.32	O
ATOM	1552	N	VAL	A	112	32.245	7.941	31.531	1.00	21.22	N
ATOM	1554	CA	VAL	A	112	31.195	7.221	32.277	1.00	20.83	C
ATOM	1556	CB	VAL	A	112	31.790	6.302	33.409	1.00	19.69	C
ATOM	1558	CG1	VAL	A	112	30.593	5.613	34.195	1.00	20.14	C
ATOM	1562	CG2	VAL	A	112	32.618	5.310	32.836	1.00	20.50	C
ATOM	1566	C	VAL	A	112	30.203	8.150	32.894	1.00	19.35	C
ATOM	1567	O	VAL	A	112	30.596	9.174	33.480	1.00	21.72	O
ATOM	1568	N	LYS	A	113	28.908	7.835	32.785	1.00	20.43	N
ATOM	1570	CA	LYS	A	113	27.844	8.644	33.370	1.00	20.49	C
ATOM	1572	CB	LYS	A	113	26.687	8.861	32.369	1.00	21.50	C
ATOM	1575	CG	LYS	A	113	25.545	9.746	32.924	1.00	24.08	C
ATOM	1578	CD	LYS	A	113	24.558	10.228	31.790	1.00	28.15	C
ATOM	1581	CE	LYS	A	113	23.215	10.866	32.266	1.00	31.60	C
ATOM	1584	NZ	LYS	A	113	23.092	11.381	33.621	1.00	36.00	N
ATOM	1588	C	LYS	A	113	27.264	8.011	34.634	1.00	19.51	C
ATOM	1589	O	LYS	A	113	26.729	6.918	34.556	1.00	21.27	O
ATOM	1590	N	VAL	A	114	27.360	8.688	35.760	1.00	19.08	N
ATOM	1592	CA	VAL	A	114	26.836	8.183	37.028	1.00	19.56	C
ATOM	1594	CB	VAL	A	114	27.580	8.731	38.199	1.00	19.00	C
ATOM	1596	CG1	VAL	A	114	27.034	8.140	39.512	1.00	19.03	C
ATOM	1600	CG2	VAL	A	114	29.072	8.471	38.104	1.00	21.17	C
ATOM	1604	C	VAL	A	114	25.358	8.538	37.218	1.00	19.64	C
ATOM	1605	O	VAL	A	114	24.946	9.714	37.075	1.00	21.35	O
ATOM	1606	N	GLU	A	115	24.562	7.519	37.487	1.00	19.24	N
ATOM	1608	CA	GLU	A	115	23.143	7.650	37.770	1.00	18.63	C
ATOM	1610	CB	GLU	A	115	22.320	7.133	36.585	1.00	18.96	C
ATOM	1613	CG	GLU	A	115	22.648	7.917	35.313	1.00	20.87	C
ATOM	1616	CD	GLU	A	115	21.571	7.899	34.226	1.00	27.57	C
ATOM	1617	OE1	GLU	A	115	20.424	7.503	34.481	1.00	28.24	O
ATOM	1618	OE2	GLU	A	115	21.896	8.323	33.108	1.00	30.43	O
ATOM	1619	C	GLU	A	115	22.798	6.843	39.006	1.00	18.89	C
ATOM	1620	O	GLU	A	115	23.650	6.123	39.504	1.00	18.94	O
ATOM	1621	N	THR	A	116	21.575	7.018	39.503	1.00	17.89	N
ATOM	1623	CA	THR	A	116	21.042	6.265	40.627	1.00	18.76	C
ATOM	1625	CB	THR	A	116	21.094	7.014	42.014	1.00	18.92	C
ATOM	1627	OG1	THR	A	116	20.419	8.282	41.973	1.00	20.77	O
ATOM	1629	CG2	THR	A	116	22.530	7.318	42.462	1.00	19.10	C
ATOM	1633	C	THR	A	116	19.602	5.923	40.377	1.00	20.22	C
ATOM	1634	O	THR	A	116	18.879	6.652	39.653	1.00	20.69	O
ATOM	1635	N	ILE	A	117	19.202	4.820	41.010	1.00	19.42	N
ATOM	1637	CA	ILE	A	117	17.796	4.496	41.189	1.00	18.29	C

Figure 5-19

ATOM	1639	CB	ILE	A	117	17.318	3.284	40.379	1.00	17.89	C
ATOM	1641	CG1	ILE	A	117	18.143	2.046	40.710	1.00	16.30	C
ATOM	1644	CD1	ILE	A	117	17.717	0.887	39.886	1.00	14.98	C
ATOM	1648	CG2	ILE	A	117	17.357	3.572	38.896	1.00	18.08	C
ATOM	1652	C	ILE	A	117	17.602	4.252	42.686	1.00	17.90	C
ATOM	1653	O	ILE	A	117	18.495	3.723	43.382	1.00	18.47	O
ATOM	1654	N	GLY	A	118	16.437	4.579	43.197	1.00	18.03	N
ATOM	1656	CA	GLY	A	118	16.167	4.403	44.593	1.00	19.83	C
ATOM	1659	C	GLY	A	118	15.691	5.702	45.193	1.00	21.68	C
ATOM	1660	O	GLY	A	118	15.591	6.686	44.459	1.00	22.78	O
ATOM	1661	N	PHE	A	119	15.359	5.666	46.463	1.00	24.23	N
ATOM	1663	CA	PHE	A	119	14.853	6.829	47.183	1.00	27.03	C
ATOM	1665	CB	PHE	A	119	13.773	6.403	48.152	1.00	26.81	C
ATOM	1668	CG	PHE	A	119	12.702	5.628	47.485	1.00	26.22	C
ATOM	1669	CD1	PHE	A	119	12.766	4.248	47.454	1.00	28.52	C
ATOM	1671	CE1	PHE	A	119	11.783	3.512	46.846	1.00	27.75	C
ATOM	1673	CZ	PHE	A	119	10.769	4.130	46.209	1.00	26.61	C
ATOM	1675	CE2	PHE	A	119	10.678	5.519	46.220	1.00	27.63	C
ATOM	1677	CD2	PHE	A	119	11.667	6.262	46.824	1.00	27.28	C
ATOM	1679	C	PHE	A	119	15.992	7.509	47.867	1.00	31.21	C
ATOM	1680	O	PHE	A	119	16.326	7.269	49.011	1.00	30.42	O
ATOM	1681	N	THR	A	120	16.618	8.308	47.044	1.00	35.84	N
ATOM	1683	CA	THR	A	120	17.723	9.134	47.377	1.00	40.84	C
ATOM	1685	CB	THR	A	120	18.053	9.904	46.094	1.00	41.46	C
ATOM	1687	OG1	THR	A	120	19.173	9.271	45.454	1.00	42.35	O
ATOM	1689	CG2	THR	A	120	18.450	11.349	46.401	1.00	43.16	C
ATOM	1693	C	THR	A	120	17.403	10.086	48.525	1.00	43.46	C
ATOM	1694	O	THR	A	120	18.289	10.399	49.299	1.00	44.61	O
ATOM	1695	N	ASP	A	121	16.143	10.497	48.643	1.00	47.31	N
ATOM	1697	CA	ASP	A	121	15.737	11.435	49.695	1.00	50.01	C
ATOM	1699	CB	ASP	A	121	14.209	11.570	49.921	1.00	50.75	C
ATOM	1702	CG	ASP	A	121	13.347	11.236	48.704	1.00	54.79	C
ATOM	1703	OD1	ASP	A	121	13.846	11.206	47.551	1.00	61.49	O
ATOM	1704	OD2	ASP	A	121	12.110	11.008	48.825	1.00	58.98	O
ATOM	1705	C	ASP	A	121	16.286	10.928	51.009	1.00	51.36	C
ATOM	1706	O	ASP	A	121	16.965	11.661	51.735	1.00	51.86	O
ATOM	1707	N	LYS	A	122	15.972	9.676	51.318	1.00	51.80	N
ATOM	1709	CA	LYS	A	122	16.309	9.132	52.619	1.00	52.11	C
ATOM	1711	CB	LYS	A	122	15.685	7.758	52.788	1.00	52.52	C
ATOM	1714	CG	LYS	A	122	14.188	7.747	52.807	1.00	55.64	C
ATOM	1717	CD	LYS	A	122	13.696	6.497	53.547	1.00	59.67	C
ATOM	1720	CE	LYS	A	122	12.190	6.279	53.350	1.00	61.22	C
ATOM	1723	NZ	LYS	A	122	11.686	5.088	54.128	1.00	61.94	N
ATOM	1727	C	LYS	A	122	17.812	8.975	52.894	1.00	51.16	C
ATOM	1728	O	LYS	A	122	18.197	8.276	53.832	1.00	51.42	O

Figure 5-20

ATOM	1729	N	LEU A 123	18.680	9.631	52.149	1.00	50.15	N
ATOM	1731	CA	LEU A 123	20.108	9.391	52.368	1.00	48.71	C
ATOM	1733	CB	LEU A 123	20.797	9.223	51.027	1.00	48.64	C
ATOM	1736	CG	LEU A 123	20.440	7.988	50.196	1.00	46.77	C
ATOM	1738	CD1	LEU A 123	21.470	7.818	49.115	1.00	45.94	C
ATOM	1742	CD2	LEU A 123	20.343	6.768	51.084	1.00	45.63	C
ATOM	1746	C	LEU A 123	20.868	10.471	53.167	1.00	48.55	C
ATOM	1747	O	LEU A 123	20.386	11.571	53.291	1.00	47.82	O
ATOM	1748	N	PRO A 124	21.957	10.099	53.847	1.00	48.08	N
ATOM	1749	CA	PRO A 124	22.927	11.042	54.445	1.00	47.51	C
ATOM	1751	CB	PRO A 124	24.107	10.120	54.818	1.00	48.23	C
ATOM	1754	CG	PRO A 124	23.421	8.804	55.178	1.00	49.02	C
ATOM	1757	CD	PRO A 124	22.123	8.748	54.403	1.00	48.73	C
ATOM	1760	C	PRO A 124	23.333	12.280	53.568	1.00	46.05	C
ATOM	1761	O	PRO A 124	23.871	12.133	52.466	1.00	44.21	O
ATOM	1762	N	LYS A 125	23.102	13.498	54.090	1.00	45.42	N
ATOM	1764	CA	LYS A 125	23.314	14.732	53.308	1.00	44.94	C
ATOM	1766	CB	LYS A 125	23.090	16.025	54.084	1.00	46.11	C
ATOM	1769	CG	LYS A 125	22.219	15.907	55.269	1.00	50.32	C
ATOM	1772	CD	LYS A 125	20.784	16.363	54.959	1.00	54.20	C
ATOM	1775	CE	LYS A 125	19.825	15.887	56.085	1.00	56.24	C
ATOM	1778	NZ	LYS A 125	18.551	16.672	56.194	1.00	55.76	N
ATOM	1782	C	LYS A 125	24.678	14.812	52.749	1.00	43.22	C
ATOM	1783	O	LYS A 125	24.894	15.403	51.706	1.00	43.46	O
ATOM	1784	N	SER A 126	25.644	14.219	53.386	1.00	40.92	N
ATOM	1786	CA	SER A 126	26.903	14.331	52.735	1.00	39.77	C
ATOM	1788	CB	SER A 126	28.046	14.354	53.730	1.00	41.05	C
ATOM	1791	OG	SER A 126	28.288	13.069	54.239	1.00	41.88	O
ATOM	1793	C	SER A 126	27.024	13.211	51.672	1.00	38.00	C
ATOM	1794	O	SER A 126	27.828	13.318	50.762	1.00	37.20	O
ATOM	1795	N	THR A 127	26.192	12.173	51.795	1.00	36.15	N
ATOM	1797	CA	THR A 127	26.132	11.101	50.795	1.00	35.01	C
ATOM	1799	CB	THR A 127	25.215	9.972	51.276	1.00	35.28	C
ATOM	1801	OG1	THR A 127	25.586	9.517	52.613	1.00	37.62	O
ATOM	1803	CG2	THR A 127	25.375	8.773	50.354	1.00	34.58	C
ATOM	1807	C	THR A 127	25.506	11.683	49.524	1.00	33.00	C
ATOM	1808	O	THR A 127	26.035	11.590	48.431	1.00	32.06	O
ATOM	1809	N	ILE A 128	24.371	12.302	49.720	1.00	32.55	N
ATOM	1811	CA	ILE A 128	23.634	12.936	48.632	1.00	33.42	C
ATOM	1813	CB	ILE A 128	22.375	13.598	49.205	1.00	34.29	C
ATOM	1815	CG1	ILE A 128	21.393	12.546	49.701	1.00	34.55	C
ATOM	1818	CD1	ILE A 128	20.490	13.018	50.819	1.00	35.86	C
ATOM	1822	CG2	ILE A 128	21.725	14.512	48.139	1.00	35.87	C
ATOM	1826	C	ILE A 128	24.471	13.975	47.895	1.00	32.25	C
ATOM	1827	O	ILE A 128	24.515	14.001	46.658	1.00	30.59	O

Figure 5-21

ATOM	1828	N	GLU	A	129	25.142	14.845	48.650	1.00	32.15	N
ATOM	1830	CA	GLU	A	129	25.949	15.880	48.018	1.00	32.23	C
ATOM	1832	CB	GLU	A	129	26.544	16.821	49.065	1.00	32.98	C
ATOM	1835	CG	GLU	A	129	25.430	17.577	49.805	1.00	37.27	C
ATOM	1838	CD	GLU	A	129	25.898	18.689	50.728	1.00	43.34	C
ATOM	1839	OE1	GLU	A	129	27.139	18.915	50.838	1.00	47.96	O
ATOM	1840	OE2	GLU	A	129	25.003	19.346	51.342	1.00	43.81	O
ATOM	1841	C	GLU	A	129	27.017	15.245	47.142	1.00	30.70	C
ATOM	1842	O	GLU	A	129	27.261	15.677	46.047	1.00	28.60	O
ATOM	1843	N	ALA	A	130	27.648	14.188	47.646	1.00	29.28	N
ATOM	1845	CA	ALA	A	130	28.694	13.517	46.916	1.00	28.07	C
ATOM	1847	CB	ALA	A	130	29.352	12.448	47.789	1.00	28.03	C
ATOM	1851	C	ALA	A	130	28.100	12.877	45.641	1.00	26.91	C
ATOM	1852	O	ALA	A	130	28.660	13.023	44.600	1.00	26.06	O
ATOM	1853	N	ILE	A	131	26.985	12.175	45.777	1.00	26.72	N
ATOM	1855	CA	ILE	A	131	26.310	11.547	44.626	1.00	27.04	C
ATOM	1857	CB	ILE	A	131	25.087	10.755	45.137	1.00	27.32	C
ATOM	1859	CG1	ILE	A	131	25.538	9.458	45.849	1.00	27.64	C
ATOM	1862	CD1	ILE	A	131	24.482	8.940	46.729	1.00	29.11	C
ATOM	1866	CG2	ILE	A	131	24.136	10.365	44.010	1.00	27.93	C
ATOM	1870	C	ILE	A	131	25.920	12.620	43.563	1.00	26.60	C
ATOM	1871	O	ILE	A	131	26.263	12.511	42.372	1.00	26.82	O
ATOM	1872	N	ASN	A	132	25.260	13.680	44.020	1.00	26.44	N
ATOM	1874	CA	ASN	A	132	24.846	14.787	43.120	1.00	27.52	C
ATOM	1876	CB	ASN	A	132	24.052	15.821	43.917	1.00	27.47	C
ATOM	1879	CG	ASN	A	132	22.609	15.391	44.141	1.00	30.87	C
ATOM	1880	OD1	ASN	A	132	22.136	14.451	43.513	1.00	34.14	O
ATOM	1881	ND2	ASN	A	132	21.904	16.085	45.026	1.00	31.65	N
ATOM	1884	C	ASN	A	132	25.973	15.441	42.315	1.00	26.95	C
ATOM	1885	O	ASN	A	132	25.819	15.696	41.119	1.00	26.30	O
ATOM	1886	N	ASN	A	133	27.115	15.694	42.970	1.00	28.16	N
ATOM	1888	CA	ASN	A	133	28.301	16.214	42.295	1.00	27.99	C
ATOM	1890	CB	ASN	A	133	29.426	16.465	43.310	1.00	28.91	C
ATOM	1893	CG	ASN	A	133	30.687	17.055	42.663	1.00	30.79	C
ATOM	1894	OD1	ASN	A	133	30.679	18.179	42.185	1.00	32.81	O
ATOM	1895	ND2	ASN	A	133	31.767	16.276	42.622	1.00	33.42	N
ATOM	1898	C	ASN	A	133	28.792	15.265	41.188	1.00	27.08	C
ATOM	1899	O	ASN	A	133	29.167	15.669	40.074	1.00	26.99	O
ATOM	1900	N	ALA	A	134	28.889	13.973	41.505	1.00	26.84	N
ATOM	1902	CA	ALA	A	134	29.287	13.023	40.486	1.00	26.24	C
ATOM	1904	CB	ALA	A	134	29.487	11.631	41.082	1.00	26.73	C
ATOM	1908	C	ALA	A	134	28.307	12.967	39.341	1.00	25.43	C
ATOM	1909	O	ALA	A	134	28.710	12.892	38.199	1.00	24.70	O
ATOM	1910	N	LYS	A	135	27.023	12.988	39.652	1.00	25.48	N

Figure 5-22

ATOM	1912	CA	LYS	A	135	26.012	13.026	38.616	1.00	26.60	C
ATOM	1914	CB	LYS	A	135	24.635	13.032	39.234	1.00	26.47	C
ATOM	1917	CG	LYS	A	135	24.189	11.700	39.805	1.00	27.64	C
ATOM	1920	CD	LYS	A	135	22.838	11.840	40.445	1.00	28.64	C
ATOM	1923	CE	LYS	A	135	22.119	10.542	40.658	1.00	32.99	C
ATOM	1926	NZ	LYS	A	135	20.658	10.847	40.900	1.00	33.57	N
ATOM	1930	C	LYS	A	135	26.231	14.304	37.779	1.00	28.10	C
ATOM	1931	O	LYS	A	135	26.263	14.255	36.559	1.00	26.96	O
ATOM	1932	N	GLU	A	136	26.442	15.423	38.459	1.00	30.14	N
ATOM	1934	CA	GLU	A	136	26.591	16.721	37.766	1.00	31.86	C
ATOM	1936	CB	GLU	A	136	26.646	17.851	38.788	1.00	33.63	C
ATOM	1939	CG	GLU	A	136	25.300	18.259	39.372	1.00	38.81	C
ATOM	1942	CD	GLU	A	136	25.424	19.220	40.545	1.00	45.39	C
ATOM	1943	OE1	GLU	A	136	26.538	19.738	40.770	1.00	50.00	O
ATOM	1944	OE2	GLU	A	136	24.414	19.449	41.248	1.00	49.83	O
ATOM	1945	C	GLU	A	136	27.821	16.772	36.859	1.00	31.26	C
ATOM	1946	O	GLU	A	136	27.732	17.192	35.689	1.00	30.86	O
ATOM	1947	N	LYS	A	137	28.967	16.335	37.382	1.00	30.48	N
ATOM	1949	CA	LYS	A	137	30.209	16.290	36.599	1.00	29.51	C
ATOM	1951	CB	LYS	A	137	31.416	16.023	37.509	1.00	29.97	C
ATOM	1954	CG	LYS	A	137	31.686	17.047	38.635	1.00	30.48	C
ATOM	1957	CD	LYS	A	137	31.769	18.491	38.150	1.00	32.50	C
ATOM	1960	CE	LYS	A	137	32.227	19.379	39.320	1.00	33.84	C
ATOM	1963	NZ	LYS	A	137	31.136	19.636	40.305	1.00	38.27	N
ATOM	1967	C	LYS	A	137	30.221	15.277	35.447	1.00	28.47	C
ATOM	1968	O	LYS	A	137	31.068	15.346	34.593	1.00	29.21	O
ATOM	1969	N	THR	A	138	29.310	14.310	35.430	1.00	27.31	N
ATOM	1971	CA	THR	A	138	29.294	13.301	34.390	1.00	26.62	C
ATOM	1973	CB	THR	A	138	29.466	11.874	35.001	1.00	25.85	C
ATOM	1975	OG1	THR	A	138	28.409	11.603	35.948	1.00	24.06	O
ATOM	1977	CG2	THR	A	138	30.747	11.806	35.852	1.00	26.39	C
ATOM	1981	C	THR	A	138	28.028	13.335	33.558	1.00	26.55	C
ATOM	1982	O	THR	A	138	27.863	12.515	32.709	1.00	26.31	O
ATOM	1983	N	ALA	A	139	27.155	14.306	33.808	1.00	28.34	N
ATOM	1985	CA	ALA	A	139	25.841	14.356	33.157	1.00	29.39	C
ATOM	1987	CB	ALA	A	139	25.066	15.541	33.659	1.00	30.19	C
ATOM	1991	C	ALA	A	139	25.826	14.351	31.642	1.00	29.63	C
ATOM	1992	O	ALA	A	139	24.832	13.928	31.064	1.00	30.80	O
ATOM	1993	N	ASN	A	140	26.897	14.818	31.005	1.00	30.37	N
ATOM	1995	CA	ASN	A	140	26.988	14.886	29.550	1.00	31.27	C
ATOM	1997	CB	ASN	A	140	27.483	16.294	29.154	1.00	32.75	C
ATOM	2000	CG	ASN	A	140	26.479	17.375	29.512	1.00	33.74	C
ATOM	2001	OD1	ASN	A	140	25.253	17.152	29.457	1.00	37.70	O
ATOM	2002	ND2	ASN	A	140	26.973	18.541	29.880	1.00	38.58	N
ATOM	2005	C	ASN	A	140	27.872	13.777	28.922	1.00	31.79	C

Figure 5-23

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ATOM   2006  O    ASN A 140    28.111  13.740  27.710  1.00 31.16        O
ATOM   2007  N    ASN A 141    28.367  12.860  29.762  1.00 30.17        N
ATOM   2009  CA   ASN A 141    29.111  11.727  29.268  1.00 28.98        C
ATOM   2011  CB   ASN A 141    29.786  11.022  30.429  1.00 28.17        C
ATOM   2014  CG   ASN A 141    30.920  11.828  31.038  1.00 30.41        C
ATOM   2015  OD1  ASN A 141    31.498  11.420  32.050  1.00 27.02        O
ATOM   2016  ND2  ASN A 141    31.289  12.952  30.398  1.00 28.83        N
ATOM   2019  C    ASN A 141    28.219  10.760  28.525  1.00 27.39        C
ATOM   2020  O    ASN A 141    27.074  10.528  28.914  1.00 28.15        O
ATOM   2021  N    THR A 142    28.761  10.143  27.494  1.00 25.05        N
ATOM   2023  CA   THR A 142    27.995   9.312  26.600  1.00 25.00        C
ATOM   2025  CB   THR A 142    28.076   9.884  25.147  1.00 26.25        C
ATOM   2027  OG1  THR A 142    29.435   9.880  24.721  1.00 26.97        O
ATOM   2029  CG2  THR A 142    27.689  11.362  25.128  1.00 28.81        C
ATOM   2033  C    THR A 142    28.453   7.885  26.586  1.00 23.01        C
ATOM   2034  O    THR A 142    28.031   7.138  25.760  1.00 23.31        O
ATOM   2035  N    GLY A 143    29.285   7.471  27.524  1.00 22.23        N
ATOM   2037  CA   GLY A 143    29.665   6.063  27.554  1.00 20.41        C
ATOM   2040  C    GLY A 143    28.832   5.251  28.540  1.00 20.61        C
ATOM   2041  O    GLY A 143    27.628   5.526  28.752  1.00 21.12        O
ATOM   2042  N    LEU A 144    29.464   4.252  29.172  1.00 19.99        N
ATOM   2044  CA   LEU A 144    28.774   3.433  30.176  1.00 18.97        C
ATOM   2046  CB   LEU A 144    29.761   2.573  30.951  1.00 18.88        C
ATOM   2049  CG   LEU A 144    29.173   1.772  32.139  1.00 19.88        C
ATOM   2051  CD1  LEU A 144    28.469   0.585  31.617  1.00 18.36        C
ATOM   2055  CD2  LEU A 144    30.371   1.381  33.083  1.00 20.07        C
ATOM   2059  C    LEU A 144    27.961   4.245  31.160  1.00 17.92        C
ATOM   2060  O    LEU A 144    28.424   5.265  31.690  1.00 19.14        O
ATOM   2061  N    LYS A 145    26.716   3.806  31.394  1.00 17.70        N
ATOM   2063  CA   LYS A 145    25.885   4.357  32.433  1.00 17.79        C
ATOM   2065  CB   LYS A 145    24.399   4.413  32.009  1.00 18.98        C
ATOM   2068  CG   LYS A 145    24.158   5.593  31.015  1.00 22.40        C
ATOM   2071  CD   LYS A 145    22.712   5.912  30.687  1.00 26.05        C
ATOM   2074  CE   LYS A 145    22.656   6.883  29.493  1.00 29.57        C
ATOM   2077  NZ   LYS A 145    21.275   6.825  28.891  1.00 37.07        N
ATOM   2081  C    LYS A 145    26.071   3.467  33.647  1.00 17.90        C
ATOM   2082  O    LYS A 145    25.724   2.306  33.595  1.00 18.27        O
ATOM   2083  N    LEU A 146    26.745   4.017  34.654  1.00 16.64        N
ATOM   2085  CA   LEU A 146    26.998   3.306  35.946  1.00 16.08        C
ATOM   2087  CB   LEU A 146    28.315   3.748  36.516  1.00 16.46        C
ATOM   2090  CG   LEU A 146    28.735   3.124  37.856  1.00 17.84        C
ATOM   2092  CD1  LEU A 146    28.714   1.640  37.693  1.00 15.64        C
ATOM   2096  CD2  LEU A 146    30.132   3.597  38.261  1.00 18.63        C
ATOM   2100  C    LEU A 146    25.913   3.711  36.875  1.00 14.86        C
ATOM   2101  O    LEU A 146    25.839   4.859  37.314  1.00 14.43        O
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Figure 5-24

ATOM	2102	N	ILE A 147	25.037	2.768	37.170	1.00 15.31	N
ATOM	2104	CA	ILE A 147	23.841	3.012	37.914	1.00 14.03	C
ATOM	2106	CB	ILE A 147	22.667	2.448	37.113	1.00 15.45	C
ATOM	2108	CG1	ILE A 147	22.622	3.069	35.705	1.00 17.02	C
ATOM	2111	CD1	ILE A 147	21.884	2.188	34.686	1.00 16.53	C
ATOM	2115	CG2	ILE A 147	21.356	2.760	37.776	1.00 17.34	C
ATOM	2119	C	ILE A 147	23.860	2.369	39.287	1.00 15.48	C
ATOM	2120	O	ILE A 147	23.806	1.131	39.386	1.00 14.27	O
ATOM	2121	N	PHE A 148	23.877	3.190	40.337	1.00 15.33	N
ATOM	2123	CA	PHE A 148	23.853	2.680	41.714	1.00 15.28	C
ATOM	2125	CB	PHE A 148	24.708	3.555	42.622	1.00 15.14	C
ATOM	2128	CG	PHE A 148	26.175	3.566	42.273	1.00 17.86	C
ATOM	2129	CD1	PHE A 148	26.981	2.484	42.609	1.00 22.24	C
ATOM	2131	CE1	PHE A 148	28.322	2.479	42.242	1.00 24.27	C
ATOM	2133	CZ	PHE A 148	28.863	3.572	41.594	1.00 25.59	C
ATOM	2135	CE2	PHE A 148	28.090	4.625	41.269	1.00 23.93	C
ATOM	2137	CD2	PHE A 148	26.753	4.628	41.601	1.00 20.24	C
ATOM	2139	C	PHE A 148	22.421	2.603	42.224	1.00 15.00	C
ATOM	2140	O	PHE A 148	21.733	3.581	42.230	1.00 15.07	O
ATOM	2141	N	ALA A 149	21.983	1.403	42.621	1.00 14.72	N
ATOM	2143	CA	ALA A 149	20.709	1.185	43.242	1.00 14.17	C
ATOM	2145	CB	ALA A 149	20.194	-0.151	42.913	1.00 14.78	C
ATOM	2149	C	ALA A 149	20.866	1.295	44.759	1.00 15.52	C
ATOM	2150	O	ALA A 149	21.249	0.316	45.388	1.00 16.47	O
ATOM	2151	N	ILE A 150	20.562	2.466	45.295	1.00 16.74	N
ATOM	2153	CA	ILE A 150	20.790	2.844	46.686	1.00 18.03	C
ATOM	2155	CB	ILE A 150	21.775	4.024	46.787	1.00 19.24	C
ATOM	2157	CG1	ILE A 150	23.045	3.774	46.014	1.00 23.93	C
ATOM	2160	CD1	ILE A 150	23.974	5.019	45.901	1.00 27.20	C
ATOM	2164	CG2	ILE A 150	22.200	4.172	48.247	1.00 21.30	C
ATOM	2168	C	ILE A 150	19.467	3.236	47.348	1.00 17.53	C
ATOM	2169	O	ILE A 150	18.755	4.144	46.879	1.00 18.10	O
ATOM	2170	N	ASN A 151	19.124	2.528	48.412	1.00 17.27	N
ATOM	2172	CA	ASN A 151	17.808	2.610	49.035	1.00 18.05	C
ATOM	2174	CB	ASN A 151	17.549	3.934	49.689	1.00 19.07	C
ATOM	2177	CG	ASN A 151	16.339	3.883	50.591	1.00 21.11	C
ATOM	2178	OD1	ASN A 151	15.987	2.814	51.090	1.00 20.31	O
ATOM	2179	ND2	ASN A 151	15.724	5.048	50.855	1.00 22.15	N
ATOM	2182	C	ASN A 151	16.757	2.310	47.990	1.00 18.97	C
ATOM	2183	O	ASN A 151	15.801	3.073	47.814	1.00 19.79	O
ATOM	2184	N	TYR A 152	16.960	1.169	47.300	1.00 17.97	N
ATOM	2186	CA	TYR A 152	16.145	0.735	46.181	1.00 17.14	C

Figure 5-25

ATOM	2188	CB	TYR A 152	17.014	0.589	44.932	1.00 16.30	C
ATOM	2191	CG	TYR A 152	16.214	-0.098	43.854	1.00 17.01	C
ATOM	2192	CD1	TYR A 152	15.334	0.599	43.061	1.00 16.08	C
ATOM	2194	CE1	TYR A 152	14.606	-0.004	42.106	1.00 13.74	C
ATOM	2196	CZ	TYR A 152	14.652	-1.342	41.984	1.00 16.95	C
ATOM	2197	OH	TYR A 152	13.879	-1.922	41.002	1.00 19.37	O
ATOM	2199	CE2	TYR A 152	15.514	-2.061	42.742	1.00 17.81	C
ATOM	2201	CD2	TYR A 152	16.258	-1.440	43.715	1.00 16.89	C
ATOM	2203	C	TYR A 152	15.517	-0.609	46.495	1.00 17.42	C
ATOM	2204	O	TYR A 152	16.147	-1.413	47.154	1.00 15.67	O
ATOM	2205	N	GLY A 153	14.273	-0.811	46.063	1.00 16.45	N
ATOM	2207	CA	GLY A 153	13.582	-2.063	46.246	1.00 16.91	C
ATOM	2210	C	GLY A 153	12.524	-2.117	45.153	1.00 16.43	C
ATOM	2211	O	GLY A 153	11.922	-1.078	44.816	1.00 15.62	O
ATOM	2212	N	GLY A 154	12.362	-3.259	44.505	1.00 13.23	N
ATOM	2214	CA	GLY A 154	11.391	-3.361	43.444	1.00 15.77	C
ATOM	2217	C	GLY A 154	9.956	-3.147	43.858	1.00 15.88	C
ATOM	2218	O	GLY A 154	9.179	-2.495	43.118	1.00 17.22	O
ATOM	2219	N	ARG A 155	9.591	-3.685	44.996	1.00 17.38	N
ATOM	2221	CA	ARG A 155	8.223	-3.520	45.442	1.00 18.28	C
ATOM	2223	CB	ARG A 155	7.985	-4.327	46.660	1.00 19.82	C
ATOM	2226	CG	ARG A 155	7.637	-5.793	46.321	1.00 19.33	C
ATOM	2229	CD	ARG A 155	7.341	-6.590	47.522	1.00 19.68	C
ATOM	2232	NE	ARG A 155	7.048	-7.981	47.152	1.00 17.70	N
ATOM	2234	CZ	ARG A 155	6.421	-8.832	47.917	1.00 21.19	C
ATOM	2235	NH1	ARG A 155	6.084	-8.488	49.141	1.00 22.37	N
ATOM	2238	NH2	ARG A 155	6.182	-10.057	47.487	1.00 19.80	N
ATOM	2241	C	ARG A 155	7.968	-2.007	45.737	1.00 19.50	C
ATOM	2242	O	ARG A 155	6.991	-1.446	45.273	1.00 19.06	O
ATOM	2243	N	ALA A 156	8.931	-1.351	46.367	1.00 18.85	N
ATOM	2245	CA	ALA A 156	8.822	0.085	46.694	1.00 19.21	C
ATOM	2247	CB	ALA A 156	9.901	0.493	47.685	1.00 20.79	C
ATOM	2251	C	ALA A 156	8.818	0.950	45.451	1.00 20.44	C
ATOM	2252	O	ALA A 156	8.078	1.955	45.407	1.00 21.72	O
ATOM	2253	N	GLU A 157	9.607	0.585	44.429	1.00 19.55	N
ATOM	2255	CA	GLU A 157	9.639	1.249	43.140	1.00 20.66	C
ATOM	2257	CB	GLU A 157	10.635	0.593	42.159	1.00 18.64	C
ATOM	2260	CG	GLU A 157	10.527	1.073	40.713	1.00 22.36	C
ATOM	2263	CD	GLU A 157	11.539	0.447	39.769	1.00 17.16	C
ATOM	2264	OE1	GLU A 157	11.919	-0.767	39.961	1.00 18.55	O
ATOM	2265	OE2	GLU A 157	11.981	1.141	38.814	1.00 20.62	O
ATOM	2266	C	GLU A 157	8.267	1.180	42.499	1.00 21.44	C
ATOM	2267	O	GLU A 157	7.776	2.181	41.966	1.00 21.31	O
ATOM	2268	N	LEU A 158	7.669	-0.006	42.498	1.00 20.86	N
ATOM	2270	CA	LEU A 158	6.356	-0.167	41.896	1.00 21.83	C
ATOM	2272	CB	LEU A 158	5.948	-1.646	41.829	1.00 21.43	C
ATOM	2275	CG	LEU A 158	6.424	-2.322	40.552	1.00 21.25	C
ATOM	2277	CD1	LEU A 158	6.615	-3.840	40.785	1.00 21.37	C
ATOM	2281	CD2	LEU A 158	5.569	-2.086	39.351	1.00 22.07	C

Figure 5-26

ATOM	2285	C	LEU A 158	5.274	0.627	42.622	1.00	23.95	C
ATOM	2286	O	LEU A 158	4.410	1.232	41.958	1.00	24.54	O
ATOM	2287	N	VAL A 159	5.317	0.611	43.941	1.00	25.78	N
ATOM	2289	CA	VAL A 159	4.327	1.308	44.746	1.00	28.05	C
ATOM	2291	CB	VAL A 159	4.557	1.079	46.222	1.00	28.19	C.
ATOM	2293	CG1	VAL A 159	3.811	2.079	47.095	1.00	30.63	C
ATOM	2297	CG2	VAL A 159	4.108	-0.318	46.630	1.00	27.07	C
ATOM	2301	C	VAL A 159	4.401	2.806	44.369	1.00	29.71	C
ATOM	2302	O	VAL A 159	3.389	3.454	44.036	1.00	28.90	O
ATOM	2303	N	HIS A 160	5.606	3.340	44.452	1.00	29.66	N
ATOM	2305	CA	HIS A 160	5.856	4.729	44.095	1.00	31.05	C
ATOM	2307	CB	HIS A 160	7.353	5.012	44.221	1.00	30.62	C
ATOM	2310	CG	HIS A 160	7.698	6.438	43.988	1.00	31.39	C
ATOM	2311	ND1	HIS A 160	8.199	6.893	42.788	1.00	32.63	N
ATOM	2313	CE1	HIS A 160	8.402	8.195	42.868	1.00	30.14	C
ATOM	2315	NE2	HIS A 160	8.010	8.604	44.060	1.00	29.50	N
ATOM	2317	CD2	HIS A 160	7.556	7.527	44.780	1.00	31.56	C
ATOM	2319	C	HIS A 160	5.389	5.094	42.697	1.00	32.15	C
ATOM	2320	O	HIS A 160	4.623	6.073	42.563	1.00	33.83	O
ATOM	2321	N	SER A 161	5.826	4.319	41.692	1.00	31.48	N
ATOM	2323	CA	SER A 161	5.505	4.472	40.262	1.00	32.90	C
ATOM	2325	CB	SER A 161	6.093	3.371	39.374	1.00	32.79	C
ATOM	2328	OG	SER A 161	7.480	3.587	39.115	1.00	31.01	O
ATOM	2330	C	SER A 161	3.970	4.512	40.116	1.00	34.85	C
ATOM	2331	O	SER A 161	3.415	5.243	39.256	1.00	33.91	O
ATOM	2332	N	ILE A 162	3.323	3.752	41.013	1.00	35.77	N
ATOM	2334	CA	ILE A 162	1.866	3.589	41.065	1.00	38.69	C
ATOM	2336	CB	ILE A 162	1.483	2.268	41.696	1.00	37.84	C
ATOM	2338	CG1	ILE A 162	1.796	1.164	40.721	1.00	36.97	C
ATOM	2341	CD1	ILE A 162	2.036	-0.126	41.402	1.00	34.12	C
ATOM	2345	CG2	ILE A 162	0.004	2.197	42.038	1.00	38.58	C
ATOM	2349	C	ILE A 162	1.108	4.685	41.796	1.00	39.81	C
ATOM	2350	O	ILE A 162	0.233	5.242	41.192	1.00	40.71	O
ATOM	2351	N	LYS A 163	1.407	4.979	43.069	1.00	41.77	N
ATOM	2353	CA	LYS A 163	0.677	6.070	43.767	1.00	43.30	C
ATOM	2355	CB	LYS A 163	1.262	6.462	45.116	1.00	43.09	C
ATOM	2358	CG	LYS A 163	1.431	5.392	46.114	1.00	43.32	C
ATOM	2361	CD	LYS A 163	1.801	5.991	47.447	1.00	45.79	C
ATOM	2364	CE	LYS A 163	2.207	4.915	48.417	1.00	46.66	C
ATOM	2367	NZ	LYS A 163	1.671	5.127	49.807	1.00	47.62	N
ATOM	2371	C	LYS A 163	0.893	7.267	42.909	1.00	44.45	C
ATOM	2372	O	LYS A 163	0.648	8.399	43.312	1.00	46.11	O
ATOM	2373	N	ASN A 164	1.297	6.994	41.693	1.00	46.06	N
ATOM	2375	CA	ASN A 164	1.830	8.009	40.842	1.00	46.83	C
ATOM	2377	CB	ASN A 164	3.284	7.630	40.772	1.00	47.88	C
ATOM	2380	CG	ASN A 164	4.197	8.787	40.674	1.00	51.87	C
ATOM	2381	OD1	ASN A 164	5.301	8.643	40.167	1.00	60.08	O
ATOM	2382	ND2	ASN A 164	3.820	9.890	41.222	1.00	53.56	N
ATOM	2385	C	ASN A 164	1.257	8.149	39.403	1.00	46.61	C

Figure 5-27

ATOM	2386	O	ASN	A	164	0.618	9.169	39.103	1.00	47.72	O
ATOM	2387	N	MET	A	165	1.557	7.186	38.508	1.00	44.51	N
ATOM	2389	CA	MET	A	165	1.071	7.148	37.106	1.00	42.30	C
ATOM	2391	CB	MET	A	165	0.961	5.710	36.604	1.00	42.43	C
ATOM	2394	CG	MET	A	165	2.209	5.048	36.219	1.00	44.44	C
ATOM	2397	SE	MET	A	165	1.897	3.252	35.722	1.00	45.39	SE
ATOM	2398	CE	MET	A	165	1.896	2.517	37.491	1.00	46.30	C
ATOM	2402	C	MET	A	165	-0.339	7.626	37.108	1.00	39.71	C
ATOM	2403	O	MET	A	165	-0.874	8.178	36.131	1.00	37.61	O
ATOM	2404	N	PHE	A	166	-0.925	7.328	38.250	1.00	36.75	N
ATOM	2406	CA	PHE	A	166	-2.261	7.643	38.547	1.00	36.32	C
ATOM	2408	CB	PHE	A	166	-2.487	7.299	40.020	1.00	37.46	C
ATOM	2411	CG	PHE	A	166	-3.315	8.345	40.691	1.00	42.82	C
ATOM	2412	CD1	PHE	A	166	-4.636	8.443	40.376	1.00	47.35	C
ATOM	2414	CE1	PHE	A	166	-5.390	9.406	40.905	1.00	50.37	C
ATOM	2416	CZ	PHE	A	166	-4.842	10.349	41.749	1.00	51.55	C
ATOM	2418	CE2	PHE	A	166	-3.506	10.286	42.059	1.00	50.20	C
ATOM	2420	CD2	PHE	A	166	-2.733	9.285	41.518	1.00	46.62	C
ATOM	2422	C	PHE	A	166	-2.506	9.162	38.319	1.00	35.46	C
ATOM	2423	O	PHE	A	166	-3.454	9.635	37.602	1.00	31.59	O
ATOM	2424	N	ASP	A	167	-1.654	9.955	38.954	1.00	35.14	N
ATOM	2426	CA	ASP	A	167	-1.768	11.401	38.849	1.00	35.58	C
ATOM	2428	CB	ASP	A	167	-0.775	12.059	39.802	1.00	35.84	C
ATOM	2431	CG	ASP	A	167	-0.866	13.580	39.776	1.00	38.35	C
ATOM	2432	OD1	ASP	A	167	0.185	14.225	39.527	1.00	38.02	O
ATOM	2433	OD2	ASP	A	167	-1.930	14.193	39.991	1.00	38.15	O
ATOM	2434	C	ASP	A	167	-1.550	11.846	37.421	1.00	36.25	C
ATOM	2435	O	ASP	A	167	-2.286	12.711	36.913	1.00	37.31	O
ATOM	2436	N	GLU	A	168	-0.589	11.239	36.734	1.00	37.00	N
ATOM	2438	CA	GLU	A	168	-0.342	11.570	35.334	1.00	38.95	C
ATOM	2440	CB	GLU	A	168	0.902	10.830	34.798	1.00	39.48	C
ATOM	2443	CG	GLU	A	168	1.488	11.411	33.519	1.00	40.34	C
ATOM	2446	CD	GLU	A	168	2.731	10.675	33.018	1.00	39.95	C
ATOM	2447	OE1	GLU	A	168	3.775	10.690	33.717	1.00	42.15	O
ATOM	2448	OE2	GLU	A	168	2.659	10.080	31.913	1.00	39.19	O
ATOM	2449	C	GLU	A	168	-1.597	11.355	34.437	1.00	41.21	C
ATOM	2450	O	GLU	A	168	-2.091	12.335	33.870	1.00	41.39	O
ATOM	2451	N	LEU	A	169	-2.097	10.123	34.259	1.00	43.08	N
ATOM	2453	CA	LEU	A	169	-3.292	9.900	33.400	1.00	45.13	C
ATOM	2455	CB	LEU	A	169	-3.956	8.535	33.680	1.00	45.35	C
ATOM	2458	CG	LEU	A	169	-3.060	7.289	33.697	1.00	47.82	C
ATOM	2460	CD1	LEU	A	169	-3.827	6.079	34.246	1.00	48.92	C
ATOM	2464	CD2	LEU	A	169	-2.503	6.994	32.324	1.00	49.01	C
ATOM	2468	C	LEU	A	169	-4.323	11.027	33.623	1.00	46.44	C
ATOM	2469	O	LEU	A	169	-4.741	11.748	32.689	1.00	47.30	O
ATOM	2470	N	HIS	A	170	-4.735	11.115	34.886	1.00	47.15	N
ATOM	2472	CA	HIS	A	170	-5.625	12.125	35.463	1.00	48.07	C
ATOM	2474	CB	HIS	A	170	-5.327	12.112	36.967	1.00	48.83	C
ATOM	2477	CG	HIS	A	170	-6.401	11.519	37.822	1.00	51.25	C

Figure 5-28

ATOM	2478	ND1	HIS	A	170	-6.224	11.304	39.173	1.00	52.95	N
ATOM	2480	CE1	HIS	A	170	-7.342	10.835	39.696	1.00	54.48	C
ATOM	2482	NE2	HIS	A	170	-8.240	10.730	38.735	1.00	54.28	N
ATOM	2484	CD2	HIS	A	170	-7.680	11.160	37.553	1.00	55.68	C
ATOM	2486	C	HIS	A	170	-5.447	13.579	34.904	1.00	47.74	C
ATOM	2487	O	HIS	A	170	-6.310	14.153	34.239	1.00	46.55	O
ATOM	2488	N	GLN	A	171	-4.310	14.173	35.211	1.00	48.24	N
ATOM	2490	CA	GLN	A	171	-4.003	15.517	34.754	1.00	49.07	C
ATOM	2492	CB	GLN	A	171	-2.622	15.919	35.269	1.00	48.64	C
ATOM	2495	CG	GLN	A	171	-2.526	15.809	36.787	1.00	47.10	C
ATOM	2498	CD	GLN	A	171	-3.639	16.571	37.478	1.00	45.14	C
ATOM	2499	OE1	GLN	A	171	-4.328	17.407	36.848	1.00	39.58	O
ATOM	2500	NE2	GLN	A	171	-3.841	16.275	38.765	1.00	41.59	N
ATOM	2503	C	GLN	A	171	-4.053	15.679	33.235	1.00	50.41	C
ATOM	2504	O	GLN	A	171	-4.031	16.808	32.739	1.00	49.74	O
ATOM	2505	N	GLN	A	172	-4.167	14.563	32.508	1.00	51.89	N
ATOM	2507	CA	GLN	A	172	-4.160	14.599	31.049	1.00	53.77	C
ATOM	2509	CB	GLN	A	172	-3.111	13.610	30.528	1.00	53.91	C
ATOM	2512	CG	GLN	A	172	-1.695	13.899	30.918	1.00	55.27	C
ATOM.	2515	CD	GLN	A	172	-0.751	13.307	29.899	1.00	58.84	C
ATOM	2516	OE1	GLN	A	172	-1.202	12.771	28.884	1.00	60.19	O
ATOM	2517	NE2	GLN	A	172	0.555	13.412	30.146	1.00	61.41	N
ATOM	2520	C	GLN	A	172	-5.458	14.202	30.353	1.00	54.91	C
ATOM	2521	O	GLN	A	172	-5.557	14.297	29.137	1.00	55.17	O
ATOM	2522	N	GLY	A	173	-6.452	13.748	31.094	1.00	56.49	N
ATOM	2524	CA	GLY	A	173	-7.587	13.101	30.449	1.00	57.73	C
ATOM	2527	C	GLY	A	173	-7.138	11.639	30.469	1.00	58.51	C
ATOM	2528	O	GLY	A	173	-5.961	11.367	30.239	1.00	58.72	O
ATOM	2529	N	LEU	A	174	-8.025	10.682	30.717	1.00	59.79	N
ATOM	2531	CA	LEU	A	174	-7.485	9.376	31.113	1.00	60.28	C
ATOM	2533	CB	LEU	A	174	-7.314	9.506	32.635	1.00	60.17	C
ATOM	2536	CG	LEU	A	174	-8.243	10.572	33.239	1.00	60.12	C
ATOM	2538	CD1	LEU	A	174	-9.175	10.106	34.340	1.00	59.93	C
ATOM	2542	CD2	LEU	A	174	-7.373	11.631	33.742	1.00	60.49	C
ATOM	2546	C	LEU	A	174	-8.089	7.983	31.057	1.00	60.71	C
ATOM	2547	O	LEU	A	174	-9.078	7.632	30.415	1.00	61.69	O
ATOM	2548	N	ASN	A	175	-7.285	7.215	31.775	1.00	60.96	N
ATOM	2550	CA	ASN	A	175	-7.524	5.954	32.425	1.00	60.73	C
ATOM	2552	CB	ASN	A	175	-8.601	6.003	33.488	1.00	61.29	C
ATOM	2555	CG	ASN	A	175	-8.015	5.712	34.843	1.00	62.29	C
ATOM	2556	OD1	ASN	A	175	-6.797	5.761	35.010	1.00	66.10	O
ATOM	2557	ND2	ASN	A	175	-8.843	5.370	35.794	1.00	63.44	N
ATOM	2560	C	ASN	A	175	-7.359	4.591	31.937	1.00	59.54	C
ATOM	2561	O	ASN	A	175	-7.821	4.124	30.905	1.00	60.86	O
ATOM	2562	N	SER	A	176	-6.648	3.966	32.850	1.00	58.11	N
ATOM	2564	CA	SER	A	176	-6.324	2.600	32.863	1.00	56.33	C
ATOM	2566	CB	SER	A	176	-7.428	1.880	33.609	1.00	56.27	C
ATOM	2569	OG	SER	A	176	-8.638	1.864	32.878	1.00	55.01	O
ATOM	2571	C	SER	A	176	-6.143	2.135	31.449	1.00	55.62	C

Figure 5-29

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ATOM   2572  O    SER A 176     -5.118    1.588   31.099   1.00  54.86        O
ATOM   2573  N    ASP A 177     -7.110    2.395   30.605   1.00  54.36        N
ATOM   2575  CA   ASP A 177     -6.987    1.870   29.274   1.00  54.51        C
ATOM   2577  CB   ASP A 177     -8.239    2.201   28.471   1.00  54.94        C
ATOM   2580  CG   ASP A 177     -9.486    1.529   29.087   1.00  56.25        C
ATOM   2581  OD1  ASP A 177     -9.360    0.996   30.227   1.00  59.54        O
ATOM   2582  OD2  ASP A 177    -10.601    1.457   28.528   1.00  57.47        O
ATOM   2583  C    ASP A 177     -5.647    2.289   28.680   1.00  53.70        C
ATOM   2584  O    ASP A 177     -5.097    1.592   27.820   1.00  53.46        O
ATOM   2585  N    ILE A 178     -5.100    3.398   29.185   1.00  53.22        N
ATOM   2587  CA   ILE A 178     -3.736    3.806   28.840   1.00  52.58        C
ATOM   2589  CB   ILE A 178     -3.487    5.291   29.138   1.00  52.65        C
ATOM   2591  CG1  ILE A 178     -4.345    6.183   28.240   1.00  55.38        C
ATOM   2594  CD1  ILE A 178     -3.973    6.094   26.742   1.00  57.52        C
ATOM   2598  CG2  ILE A 178     -2.005    5.657   28.903   1.00  53.54        C
ATOM   2602  C    ILE A 178     -2.719    2.964   29.634   1.00  50.54        C
ATOM   2603  O    ILE A 178     -1.529    2.986   29.375   1.00  51.48        O
ATOM   2604  N    ILE A 179     -3.161    2.227   30.618   1.00  49.04        N
ATOM   2606  CA   ILE A 179     -2.192    1.430   31.345   1.00  47.21        C
ATOM   2608  CB   ILE A 179     -2.620    1.271   32.745   1.00  47.24        C
ATOM   2610  CG1  ILE A 179     -2.507    2.612   33.420   1.00  45.34        C
ATOM   2613  CD1  ILE A 179     -3.239    2.696   34.659   1.00  44.29        C
ATOM   2617  CG2  ILE A 179     -1.729    0.269   33.475   1.00  48.09        C
ATOM   2621  C    ILE A 179     -1.983    0.113   30.643   1.00  46.08        C
ATOM   2622  O    ILE A 179     -2.922   -0.578   30.301   1.00  46.78        O
ATOM   2623  N    ASP A 180     -0.732   -0.196   30.363   1.00  43.84        N
ATOM   2625  CA   ASP A 180     -0.358   -1.466   29.762   1.00  42.42        C
ATOM   2627  CB   ASP A 180     -0.417   -1.396   28.268   1.00  42.25        C
ATOM   2630  CG   ASP A 180      0.392   -0.282   27.746   1.00  44.62        C
ATOM   2631  OD1  ASP A 180      0.625    0.650   28.558   1.00  45.57        O
ATOM   2632  OD2  ASP A 180      0.821   -0.252   26.580   1.00  43.92        O
ATOM   2633  C    ASP A 180      1.057   -1.746   30.221   1.00  40.07        C
ATOM   2634  O    ASP A 180      1.533   -1.048   31.105   1.00  39.80        O
ATOM   2635  N    GLU A 181      1.737   -2.706   29.588   1.00  38.18        N
ATOM   2637  CA   GLU A 181      3.066   -3.161   30.049   1.00  35.76        C
ATOM   2639  CB   GLU A 181      3.398   -4.588   29.521   1.00  34.99        C
ATOM   2642  CG   GLU A 181      2.700   -5.729   30.304   1.00  34.67        C
ATOM   2645  CD   GLU A 181      2.941   -7.163   29.776   1.00  32.43        C
ATOM   2646  OE1  GLU A 181      4.092   -7.425   29.301   1.00  25.34        O
ATOM   2647  OE2  GLU A 181      1.970   -8.048   29.845   1.00  25.96        O
ATOM   2648  C    GLU A 181      4.120   -2.095   29.688   1.00  35.34        C
ATOM   2649  O    GLU A 181      4.809   -1.595   30.574   1.00  35.04        O
ATOM   2650  N    THR A 182      4.157   -1.701   28.415   1.00  34.48        N
ATOM   2652  CA   THR A 182      5.067   -0.684   27.872   1.00  34.75        C
ATOM   2654  CB   THR A 182      4.744   -0.503   26.346   1.00  34.50        C
ATOM   2656  OG1  THR A 182      5.230   -1.630   25.600   1.00  36.93        O
ATOM   2658  CG2  THR A 182      5.512    0.655   25.705   1.00  36.22        C
ATOM   2662  C    THR A 182      4.952    0.634   28.672   1.00  33.46        C
ATOM   2663  O    THR A 182      5.955    1.289   29.025   1.00  33.84        O
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Figure 5-30

ATOM	2664	N	TYR A 183	3.729	1.009	28.994	1.00	32.75	N
ATOM	2666	CA	TYR A 183	3.469	2.175	29.839	1.00	31.80	C
ATOM	2668	CB	TYR A 183	1.967	2.302	30.101	1.00	32.74	C
ATOM	2671	CG	TYR A 183	1.531	3.615	30.667	1.00	33.08	C
ATOM	2672	CD1	TYR A 183	1.457	4.743	29.845	1.00	36.08	C
ATOM	2674	CE1	TYR A 183	1.065	5.958	30.354	1.00	35.88	C
ATOM	2676	CZ	TYR A 183	0.725	6.064	31.673	1.00	33.84	C
ATOM	2677	OH	TYR A 183	0.358	7.300	32.158	1.00	38.24	O
ATOM	2679	CE2	TYR A 183	0.799	4.958	32.518	1.00	34.80	C
ATOM	2681	CD2	TYR A 183	1.168	3.753	32.002	1.00	30.93	C
ATOM	2683	C	TYR A 183	4.145	2.039	31.195	1.00	31.82	C
ATOM	2684	O	TYR A 183	4.728	3.000	31.727	1.00	31.30	O
ATOM	2685	N	ILE A 184	4.036	0.853	31.790	1.00	29.02	N
ATOM	2687	CA	ILE A 184	4.656	0.670	33.085	1.00	28.77	C
ATOM	2689	CB	ILE A 184	4.303	-0.697	33.711	1.00	28.03	C
ATOM	2691	CG1	ILE A 184	2.786	-0.828	33.814	1.00	30.47	C
ATOM	2694	CD1	ILE A 184	2.217	-0.024	34.908	1.00	31.42	C
ATOM	2698	CG2	ILE A 184	4.923	-0.861	35.121	1.00	27.80	C
ATOM	2702	C	ILE A 184	6.132	0.808	32.862	1.00	26.59	C
ATOM	2703	O	ILE A 184	6.762	1.520	33.623	1.00	28.92	O
ATOM	2704	N	ASN A 185	6.675	0.168	31.826	1.00	26.01	N
ATOM	2706	CA	ASN A 185	8.117	0.299	31.515	1.00	27.03	C
ATOM	2708	CB	ASN A 185	8.479	-0.265	30.168	1.00	27.76	C
ATOM	2711	CG	ASN A 185	8.516	-1.749	30.167	1.00	24.66	C
ATOM	2712	OD1	ASN A 185	8.523	-2.373	31.230	1.00	23.97	O
ATOM	2713	ND2	ASN A 185	8.499	-2.338	28.980	1.00	27.88	N
ATOM	2716	C	ASN A 185	8.548	1.738	31.573	1.00	29.00	C
ATOM	2717	O	ASN A 185	9.559	2.095	32.225	1.00	29.01	O
ATOM	2718	N	ASN A 186	7.746	2.594	30.944	1.00	28.56	N
ATOM	2720	CA	ASN A 186	8.075	4.027	30.880	1.00	29.43	C
ATOM	2722	CB	ASN A 186	7.331	4.668	29.685	1.00	29.08	C
ATOM	2725	CG	ASN A 186	7.823	4.171	28.354	1.00	32.85	C
ATOM	2726	OD1	ASN A 186	7.018	3.960	27.434	1.00	40.10	O
ATOM	2727	ND2	ASN A 186	9.143	3.982	28.211	1.00	31.78	N
ATOM	2730	C	ASN A 186	7.794	4.848	32.141	1.00	28.33	C
ATOM	2731	O	ASN A 186	8.028	6.056	32.153	1.00	29.46	O
ATOM	2732	N	HIS A 187	7.281	4.258	33.213	1.00	27.62	N
ATOM	2734	CA	HIS A 187	7.017	4.988	34.436	1.00	26.33	C
ATOM	2736	CB	HIS A 187	5.532	5.013	34.683	1.00	28.07	C
ATOM	2739	CG	HIS A 187	4.817	5.971	33.792	1.00	29.28	C
ATOM	2740	ND1	HIS A 187	4.212	7.111	34.278	1.00	34.07	N
ATOM	2742	CE1	HIS A 187	3.678	7.779	33.271	1.00	28.09	C
ATOM	2744	NE2	HIS A 187	3.979	7.155	32.147	1.00	32.42	N
ATOM	2746	CD2	HIS A 187	4.692	6.016	32.444	1.00	31.59	C
ATOM	2748	C	HIS A 187	7.789	4.507	35.704	1.00	25.58	C
ATOM	2749	O	HIS A 187	7.695	5.059	36.790	1.00	24.37	O
ATOM	2750	N	LEU A 188	8.604	3.488	35.516	1.00	25.54	N
ATOM	2752	CA	LEU A 188	9.444	3.014	36.624	1.00	24.73	C
ATOM	2754	CB	LEU A 188	9.856	1.551	36.328	1.00	23.91	C

Figure 5-31

ATOM	2757	CG	LEU A 188	8.707	0.559	36.298	1.00	25.58	C
ATOM	2759	CD1	LEU A 188	9.082	-0.800	35.663	1.00	27.12	C
ATOM	2763	CD2	LEU A 188	8.180	0.346	37.735	1.00	25.35	C
ATOM	2767	C	LEU A 188	10.691	3.914	36.721	1.00	22.49	C
ATOM	2768	O	LEU A 188	10.961	4.719	35.853	1.00	21.46	O
ATOM	2769	N	MET A 189	11.503	3.738	37.747	1.00	22.80	N
ATOM	2771	CA	MET A 189	12.778	4.485	37.853	1.00	20.65	C
ATOM	2773	CB	MET A 189	13.411	4.243	39.216	1.00	19.96	C
ATOM	2776	CG	MET A 189	12.666	4.746	40.414	1.00	23.14	C
ATOM	2779	SE	MET A 189	13.096	3.964	42.163	1.00	27.61	SE
ATOM	2780	CE	MET A 189	12.645	5.348	43.227	1.00	30.83	C
ATOM	2784	C	MET A 189	13.764	4.095	36.785	1.00	19.48	C
ATOM	2785	O	MET A 189	14.739	4.816	36.543	1.00	19.86	O
ATOM	2786	N	THR A 190	13.588	2.932	36.183	1.00	18.06	N
ATOM	2788	CA	THR A 190	14.413	2.468	35.086	1.00	19.60	C
ATOM	2790	CB	THR A 190	14.526	0.919	35.149	1.00	20.79	C
ATOM	2792	OG1	THR A 190	13.218	0.402	35.365	1.00	20.11	O
ATOM	2794	CG2	THR A 190	15.305	0.466	36.402	1.00	19.05	C
ATOM	2798	C	THR A 190	13.809	2.826	33.724	1.00	19.90	C
ATOM	2799	O	THR A 190	14.126	2.204	32.729	1.00	18.81	O
ATOM	2800	N	LYS A 191	12.968	3.854	33.658	1.00	21.69	N
ATOM	2802	CA	LYS A 191	12.325	4.215	32.365	1.00	22.77	C
ATOM	2804	CB	LYS A 191	11.402	5.414	32.537	1.00	24.95	C
ATOM	2807	CG	LYS A 191	12.082	6.640	33.118	1.00	29.61	C
ATOM	2810	CD	LYS A 191	11.125	7.858	33.298	1.00	35.89	C
ATOM	2813	CE	LYS A 191	10.000	7.653	34.358	1.00	39.73	C
ATOM	2816	NZ	LYS A 191	10.373	7.790	35.839	1.00	40.55	N
ATOM	2820	C	LYS A 191	13.296	4.481	31.236	1.00	22.64	C
ATOM	2821	O	LYS A 191	12.984	4.273	30.064	1.00	24.95	O
ATOM	2822	N	ASP A 192	14.489	4.948	31.555	1.00	23.02	N
ATOM	2824	CA	ASP A 192	15.477	5.287	30.553	1.00	24.11	C
ATOM	2826	CB	ASP A 192	16.317	6.495	31.058	1.00	25.51	C
ATOM	2829	CG	ASP A 192	15.505	7.796	31.170	1.00	29.90	C
ATOM	2830	OD1	ASP A 192	14.490	7.923	30.484	1.00	30.42	O
ATOM	2831	OD2	ASP A 192	15.802	8.738	31.954	1.00	35.85	O
ATOM	2832	C	ASP A 192	16.401	4.138	30.157	1.00	22.91	C
ATOM	2833	O	ASP A 192	17.256	4.301	29.304	1.00	23.13	O
ATOM	2834	N	TYR A 193	16.254	2.960	30.776	1.00	21.48	N
ATOM	2836	CA	TYR A 193	17.143	1.852	30.493	1.00	20.18	C
ATOM	2838	CB	TYR A 193	17.909	1.357	31.802	1.00	21.27	C
ATOM	2841	CG	TYR A 193	18.276	2.412	32.800	1.00	21.48	C
ATOM	2842	CD1	TYR A 193	18.965	3.563	32.409	1.00	20.74	C
ATOM	2844	CE1	TYR A 193	19.306	4.504	33.300	1.00	21.02	C
ATOM	2846	CZ	TYR A 193	19.015	4.335	34.643	1.00	20.28	C
ATOM	2847	OH	TYR A 193	19.365	5.347	35.509	1.00	23.63	O
ATOM	2849	CE2	TYR A 193	18.337	3.216	35.057	1.00	22.33	C
ATOM	2851	CD2	TYR A 193	17.997	2.253	34.120	1.00	21.41	C
ATOM	2853	C	TYR A 193	16.406	0.632	29.935	1.00	17.94	C
ATOM	2854	O	TYR A 193	15.263	0.357	30.266	1.00	20.02	O

Figure 5-32

ATOM	2855	N	PRO	A	194	17.068	-0.151	29.121	1.00	16.91	N
ATOM	2856	CA	PRO	A	194	16.420	-1.366	28.656	1.00	17.28	C
ATOM	2858	CB	PRO	A	194	17.280	-1.800	27.544	1.00	16.33	C
ATOM	2861	CG	PRO	A	194	18.668	-1.253	27.853	1.00	15.86	C
ATOM	2864	CD	PRO	A	194	18.451	-0.027	28.648	1.00	16.65	C
ATOM	2867	C	PRO	A	194	16.459	-2.320	29.810	1.00	16.33	C
ATOM	2868	O	PRO	A	194	17.252	-2.064	30.698	1.00	16.98	O
ATOM	2869	N	ASP	A	195	15.697	-3.383	29.758	1.00	16.36	N
ATOM	2871	CA	ASP	A	195	15.737	-4.405	30.820	1.00	16.37	C
ATOM	2873	CB	ASP	A	195	14.595	-5.385	30.761	1.00	15.91	C
ATOM	2876	CG	ASP	A	195	13.266	-4.768	31.033	1.00	15.16	C
ATOM	2877	OD1	ASP	A	195	13.164	-3.739	31.782	1.00	16.92	O
ATOM	2878	OD2	ASP	A	195	12.211	-5.303	30.564	1.00	18.16	O
ATOM	2879	C	ASP	A	195	17.073	-5.138	30.652	1.00	16.39	C
ATOM	2880	O	ASP	A	195	17.559	-5.407	29.542	1.00	17.26	O
ATOM	2881	N	PRO	A	196	17.688	-5.501	31.748	1.00	14.05	N
ATOM	2882	CA	PRO	A	196	18.979	-6.173	31.636	1.00	14.53	C
ATOM	2884	CB	PRO	A	196	19.467	-6.267	33.115	1.00	14.88	C
ATOM	2887	CG	PRO	A	196	18.249	-6.175	33.945	1.00	15.73	C
ATOM	2890	CD	PRO	A	196	17.229	-5.353	33.132	1.00	15.83	C
ATOM	2893	C	PRO	A	196	18.852	-7.567	31.021	1.00	13.81	C
ATOM	2894	O	PRO	A	196	18.015	-8.430	31.427	1.00	13.69	O
ATOM	2895	N	GLU	A	197	19.702	-7.853	30.057	1.00	14.06	N
ATOM	2897	CA	GLU	A	197	19.695	-9.207	29.555	1.00	13.26	C
ATOM	2899	CB	GLU	A	197	20.611	-9.365	28.356	1.00	15.57	C
ATOM	2902	CG	GLU	A	197	20.210	-8.466	27.161	1.00	16.76	C
ATOM	2905	CD	GLU	A	197	21.015	-7.190	27.070	1.00	17.88	C
ATOM	2906	OE1	GLU	A	197	21.299	-6.447	28.094	1.00	15.83	O
ATOM	2907	OE2	GLU	A	197	21.425	-6.913	25.912	1.00	17.52	O
ATOM	2908	C	GLU	A	197	20.182	-10.192	30.600	1.00	13.28	C
ATOM	2909	O	GLU	A	197	19.830	-11.344	30.536	1.00	12.17	O
ATOM	2910	N	LEU	A	198	21.107	-9.747	31.459	1.00	13.18	N
ATOM	2912	CA	LEU	A	198	21.857	-10.627	32.353	1.00	13.17	C
ATOM	2914	CB	LEU	A	198	23.328	-10.682	31.884	1.00	13.51	C
ATOM	2917	CG	LEU	A	198	24.334	-11.322	32.824	1.00	15.63	C
ATOM	2919	CD1	LEU	A	198	23.976	-12.795	33.038	1.00	13.99	C
ATOM	2923	CD2	LEU	A	198	25.767	-11.149	32.265	1.00	16.77	C
ATOM	2927	C	LEU	A	198	21.827	-10.065	33.767	1.00	13.19	C
ATOM	2928	O	LEU	A	198	22.153	-8.910	33.972	1.00	13.09	O
ATOM	2929	N	LEU	A	199	21.450	-10.920	34.731	1.00	13.10	N
ATOM	2931	CA	LEU	A	199	21.480	-10.554	36.131	1.00	13.29	C
ATOM	2933	CB	LEU	A	199	20.139	-10.863	36.773	1.00	13.24	C
ATOM	2936	CG	LEU	A	199	20.107	-10.650	38.293	1.00	15.28	C
ATOM	2938	CD1	LEU	A	199	20.204	-9.197	38.628	1.00	17.39	C
ATOM	2942	CD2	LEU	A	199	18.809	-11.235	38.815	1.00	18.70	C
ATOM	2946	C	LEU	A	199	22.528	-11.458	36.769	1.00	13.09	C
ATOM	2947	O	LEU	A	199	22.379	-12.706	36.694	1.00	14.10	O
ATOM	2948	N	ILE	A	200	23.578	-10.877	37.345	1.00	13.40	N
ATOM	2950	CA	ILE	A	200	24.536	-11.677	38.119	1.00	13.39	C

Figure 5-33

ATOM	2952	CB	ILE	A	200	25.960	-11.308	37.742	1.00	14.57	C
ATOM	2954	CG1	ILE	A	200	26.242	-11.506	36.253	1.00	15.43	C
ATOM	2957	CD1	ILE	A	200	27.381	-10.652	35.806	1.00	17.40	C
ATOM	2961	CG2	ILE	A	200	26.956	-12.093	38.629	1.00	14.93	C
ATOM	2965	C	ILE	A	200	24.386	-11.417	39.620	1.00	12.73	C
ATOM	2966	O	ILE	A	200	24.362	-10.291	40.071	1.00	13.67	O
ATOM	2967	N	ARG	A	201	24.394	-12.502	40.403	1.00	13.43	N
ATOM	2969	CA	ARG	A	201	24.451	-12.392	41.869	1.00	13.50	C
ATOM	2971	CB	ARG	A	201	23.208	-12.957	42.577	1.00	13.14	C
ATOM	2974	CG	ARG	A	201	23.297	-12.805	44.096	1.00	14.14	C
ATOM	2977	CD	ARG	A	201	22.042	-13.099	44.836	1.00	14.39	C
ATOM	2980	NE	ARG	A	201	22.160	-12.667	46.235	1.00	13.58	N
ATOM	2982	CZ	ARG	A	201	21.144	-12.180	46.941	1.00	15.54	C
ATOM	2983	NH1	ARG	A	201	19.947	-12.067	46.385	1.00	15.76	N
ATOM	2986	NH2	ARG	A	201	21.313	-11.745	48.206	1.00	15.70	N
ATOM	2989	C	ARG	A	201	25.673	-13.181	42.326	1.00	13.59	C
ATOM	2990	O	ARG	A	201	25.803	-14.371	41.967	1.00	15.32	O
ATOM	2991	N	THR	A	202	26.481	-12.545	43.160	1.00	14.91	N
ATOM	2993	CA	THR	A	202	27.678	-13.218	43.706	1.00	15.89	C
ATOM	2995	CB	THR	A	202	28.838	-12.274	43.838	1.00	16.01	C
ATOM	2997	OG1	THR	A	202	28.524	-11.105	44.602	1.00	14.38	O
ATOM	2999	CG2	THR	A	202	29.208	-11.715	42.416	1.00	17.46	C
ATOM	3003	C	THR	A	202	27.390	-13.873	45.048	1.00	16.23	C
ATOM	3004	O	THR	A	202	26.301	-13.660	45.584	1.00	13.87	O
ATOM	3005	N	SER	A	203	28.345	-14.696	45.493	1.00	14.91	N
ATOM	3007	CA	SER	A	203	28.292	-15.429	46.777	1.00	16.85	C
ATOM	3009	CB	SER	A	203	27.642	-14.594	47.903	1.00	16.17	C
ATOM	3012	OG	SER	A	203	26.230	-14.753	48.017	1.00	17.10	O
ATOM	3014	C	SER	A	203	27.691	-16.807	46.778	1.00	17.88	C
ATOM	3015	O	SER	A	203	27.942	-17.573	47.733	1.00	20.07	O
ATOM	3016	N	GLY	A	204	26.885	-17.179	45.767	1.00	17.00	N
ATOM	3018	CA	GLY	A	204	26.231	-18.471	45.733	1.00	17.25	C
ATOM	3021	C	GLY	A	204	24.770	-18.450	46.115	1.00	16.56	C
ATOM	3022	O	GLY	A	204	24.043	-19.443	45.894	1.00	17.87	O
ATOM	3023	N	GLU	A	205	24.294	-17.349	46.691	1.00	14.02	N
ATOM	3025	CA	GLU	A	205	22.888	-17.320	47.067	1.00	15.03	C
ATOM	3027	CB	GLU	A	205	22.558	-16.110	47.913	1.00	15.97	C
ATOM	3030	CG	GLU	A	205	23.376	-16.017	49.197	1.00	16.75	C
ATOM	3033	CD	GLU	A	205	23.247	-17.173	50.177	1.00	22.18	C
ATOM	3034	OE1	GLU	A	205	22.246	-17.892	50.177	1.00	20.42	O
ATOM	3035	OE2	GLU	A	205	24.185	-17.306	51.016	1.00	21.66	O
ATOM	3036	C	GLU	A	205	22.069	-17.296	45.774	1.00	15.08	C
ATOM	3037	O	GLU	A	205	22.508	-16.703	44.769	1.00	14.67	O
ATOM	3038	N	GLN	A	206	20.899	-17.925	45.807	1.00	14.50	N
ATOM	3040	CA	GLN	A	206	20.032	-18.009	44.657	1.00	14.75	C
ATOM	3042	CB	GLN	A	206	19.971	-19.439	44.258	1.00	14.99	C
ATOM	3045	CG	GLN	A	206	21.340	-19.930	43.805	1.00	16.67	C
ATOM	3048	CD	GLN	A	206	21.310	-21.405	43.479	1.00	23.61	C
ATOM	3049	OE1	GLN	A	206	20.894	-21.804	42.392	1.00	27.39	O

Figure 5-34

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ATOM   3050  NE2 GLN A 206     21.710 -22.237  44.468  1.00 31.31           N
ATOM   3053  C   GLN A 206     18.658 -17.449  44.994  1.00 13.25           C
ATOM   3054  O   GLN A 206     17.805 -18.167  45.459  1.00 12.74           O
ATOM   3055  N   ARG A 207     18.533 -16.134  44.811  1.00 12.34           N
ATOM   3057  CA  ARG A 207     17.334 -15.376  45.123  1.00 12.91           C
ATOM   3059  CB  ARG A 207     17.091 -15.268  46.624  1.00 12.05           C
ATOM   3062  CG  ARG A 207     18.290 -15.016  47.403  1.00 15.53           C
ATOM   3065  CD  ARG A 207     18.028 -15.281  48.895  1.00 15.22           C
ATOM   3068  NE  ARG A 207     19.049 -14.846  49.836  1.00 16.06           N
ATOM   3070  CZ  ARG A 207     19.549 -15.596  50.832  1.00 15.70           C
ATOM   3071  NH1 ARG A 207     19.218 -16.837  50.940  1.00 15.89           N
ATOM   3074  NH2 ARG A 207     20.449 -15.087  51.684  1.00 17.37           N
ATOM   3077  C   ARG A 207     17.632 -13.976  44.554  1.00 12.20           C
ATOM   3078  O   ARG A 207     18.809 -13.590  44.315  1.00 11.73           O
ATOM   3079  N   ILE A 208     16.555 -13.269  44.283  1.00 11.36           N
ATOM   3081  CA  ILE A 208     16.671 -11.920  43.729  1.00 13.31           C
ATOM   3083  CB  ILE A 208     15.722 -11.694  42.556  1.00 13.94           C
ATOM   3085  CG1 ILE A 208     14.288 -11.641  43.009  1.00 14.75           C
ATOM   3088  CD1 ILE A 208     13.396 -11.217  41.817  1.00 21.97           C
ATOM   3092  CG2 ILE A 208     16.027 -12.764  41.467  1.00 18.04           C
ATOM   3096  C   ILE A 208     16.551 -10.824  44.742  1.00 12.00           C
ATOM   3097  O   ILE A 208     16.907  -9.667  44.461  1.00 12.69           O
ATOM   3098  N   SER A 209     16.070 -11.147  45.934  1.00 13.01           N
ATOM   3100  CA  SER A 209     16.047 -10.185  47.042  1.00 12.86           C
ATOM   3102  CB  SER A 209     17.439 -10.167  47.755  1.00 12.20           C
ATOM   3105  OG  SER A 209     17.899 -11.504  48.100  1.00 14.45           O
ATOM   3107  C   SER A 209     15.504  -8.786  46.664  1.00 13.02           C
ATOM   3108  O   SER A 209     16.107  -7.728  46.983  1.00 13.38           O
ATOM   3109  N   ASN A 210     14.327  -8.741  46.020  1.00 13.18           N
ATOM   3111  CA  ASN A 210     13.675  -7.474  45.701  1.00 13.49           C
ATOM   3113  CB  ASN A 210     13.416  -6.704  47.017  1.00 14.12           C
ATOM   3116  CG  ASN A 210     12.223  -5.738  46.956  1.00 15.82           C
ATOM   3117  OD1 ASN A 210     11.403  -5.787  46.048  1.00 16.94           O
ATOM   3118  ND2 ASN A 210     12.144  -4.848  47.971  1.00 12.63           N
ATOM   3121  C   ASN A 210     14.428  -6.608  44.729  1.00 14.07           C
ATOM   3122  O   ASN A 210     14.185  -5.398  44.642  1.00 15.01           O
ATOM   3123  N   PHE A 211     15.311  -7.174  43.918  1.00 14.03           N
ATOM   3125  CA  PHE A 211     16.040  -6.349  42.932  1.00 14.80           C
ATOM   3127  CB  PHE A 211     17.471  -6.893  42.781  1.00 14.59           C
ATOM   3130  CG  PHE A 211     18.454  -6.020  42.010  1.00 11.16           C
ATOM   3131  CD1 PHE A 211     18.671  -4.665  42.313  1.00 15.88           C
ATOM   3133  CE1 PHE A 211     19.597  -3.919  41.626  1.00 17.55           C
ATOM   3135  CZ  PHE A 211     20.371  -4.529  40.644  1.00 15.33           C
ATOM   3137  CE2 PHE A 211     20.198  -5.879  40.360  1.00 14.56           C
ATOM   3139  CD2 PHE A 211     19.236  -6.599  41.034  1.00 14.74           C
ATOM   3141  C   PHE A 211     15.412  -6.397  41.530  1.00 15.30           C
ATOM   3142  O   PHE A 211     15.422  -7.487  40.912  1.00 16.52           O
ATOM   3143  N   LEU A 212     15.003  -5.245  40.999  1.00 16.59           N
ATOM   3145  CA  LEU A 212     14.484  -5.135  39.632  1.00 15.65           C
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Figure 5-35

ATOM	3147	CB	LEU A 212	15.663	-5.237	38.635	1.00	17.08	C
ATOM	3150	CG	LEU A 212	16.697	-4.156	38.820	1.00	16.07	C
ATOM	3152	CD1	LEU A 212	17.887	-4.403	37.950	1.00	16.19	C
ATOM	3156	CD2	LEU A 212	16.112	-2.740	38.515	1.00	19.75	C
ATOM	3160	C	LEU A 212	13.463	-6.214	39.339	1.00	16.70	C
ATOM	3161	O	LEU A 212	13.533	-6.841	38.309	1.00	15.03	O
ATOM	3162	N	ILE A 213	12.478	-6.400	40.230	1.00	15.76	N
ATOM	3164	CA	ILE A 213	11.586	-7.569	40.113	1.00	17.00	C
ATOM	3166	CB	ILE A 213	10.711	-7.746	41.366	1.00	17.75	C
ATOM	3168	CG1	ILE A 213	9.792	-6.526	41.576	1.00	14.92	C
ATOM	3171	CD1	ILE A 213	8.999	-6.664	42.810	1.00	18.79	C
ATOM	3175	CG2	ILE A 213	11.593	-8.034	42.605	1.00	20.78	C
ATOM	3179	C	ILE A 213	10.750	-7.552	38.820	1.00	16.19	C
ATOM	3180	O	ILE A 213	10.601	-8.570	38.179	1.00	15.06	O
ATOM	3181	N	TRP A 214	10.284	-6.380	38.417	1.00	16.99	N
ATOM	3183	CA	TRP A 214	9.586	-6.244	37.144	1.00	16.50	C
ATOM	3185	CB	TRP A 214	8.930	-4.879	37.071	1.00	17.50	C
ATOM	3188	CG	TRP A 214	8.329	-4.527	35.761	1.00	18.05	C
ATOM	3189	CD1	TRP A 214	8.964	-4.087	34.673	1.00	17.93	C
ATOM	3191	NE1	TRP A 214	8.069	-3.830	33.661	1.00	17.61	N
ATOM	3193	CE2	TRP A 214	6.813	-4.115	34.095	1.00	19.39	C
ATOM	3194	CD2	TRP A 214	6.925	-4.570	35.409	1.00	16.27	C
ATOM	3195	CE3	TRP A 214	5.780	-4.945	36.074	1.00	18.57	C
ATOM	3197	CZ3	TRP A 214	4.530	-4.815	35.408	1.00	17.64	C
ATOM	3199	CH2	TRP A 214	4.478	-4.371	34.098	1.00	18.39	C
ATOM	3201	CZ2	TRP A 214	5.587	-4.040	33.418	1.00	18.63	C
ATOM	3203	C	TRP A 214	10.508	-6.383	35.936	1.00	17.21	C
ATOM	3204	O	TRP A 214	10.211	-7.109	34.983	1.00	16.68	O
ATOM	3205	N	GLN A 215	11.631	-5.705	36.015	1.00	16.22	N
ATOM	3207	CA	GLN A 215	12.582	-5.662	34.932	1.00	16.03	C
ATOM	3209	CB	GLN A 215	13.603	-4.598	35.262	1.00	17.35	C
ATOM	3212	CG	GLN A 215	13.047	-3.220	35.469	1.00	16.37	C
ATOM	3215	CD	GLN A 215	12.693	-2.874	36.936	1.00	18.38	C
ATOM	3216	OE1	GLN A 215	12.564	-3.758	37.761	1.00	16.76	O
ATOM	3217	NE2	GLN A 215	12.592	-1.542	37.257	1.00	17.18	N
ATOM	3220	C	GLN A 215	13.307	-7.020	34.588	1.00	15.56	C
ATOM	3221	O	GLN A 215	13.718	-7.245	33.455	1.00	15.69	O
ATOM	3222	N	VAL A 216	13.470	-7.933	35.546	1.00	13.88	N
ATOM	3224	CA	VAL A 216	14.184	-9.175	35.250	1.00	13.69	C
ATOM	3226	CB	VAL A 216	14.997	-9.717	36.491	1.00	13.05	C
ATOM	3228	CG1	VAL A 216	16.006	-8.762	36.874	1.00	15.69	C
ATOM	3232	CG2	VAL A 216	14.033	-10.043	37.613	1.00	17.49	C
ATOM	3236	C	VAL A 216	13.268	-10.251	34.749	1.00	13.34	C
ATOM	3237	O	VAL A 216	13.657	-11.404	34.690	1.00	14.39	O
ATOM	3238	N	SER A 217	12.055	-9.904	34.335	1.00	14.69	N
ATOM	3240	CA	SER A 217	11.107	-10.874	33.858	1.00	14.90	C
ATOM	3242	CB	SER A 217	9.939	-10.153	33.165	1.00	16.82	C
ATOM	3245	OG	SER A 217	8.969	-11.093	32.829	1.00	18.99	O
ATOM	3247	C	SER A 217	11.667	-11.963	32.931	1.00	14.18	C
ATOM	3248	O	SER A 217	11.302	-13.143	33.102	1.00	14.20	O

Figure 5-36

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ATOM   3249  N    TYR A 218    12.536 -11.593  31.977  1.00 14.91          N
ATOM   3251  CA   TYR A 218    13.160 -12.547  31.068  1.00 15.06          C
ATOM   3253  CB   TYR A 218    12.646 -12.376  29.665  1.00 16.66          C
ATOM   3256  CG   TYR A 218    11.317 -13.104  29.508  1.00 15.74          C
ATOM   3257  CD1  TYR A 218    11.292 -14.468  29.162  1.00 14.99          C
ATOM   3259  CE1  TYR A 218    10.117 -15.142  29.034  1.00 16.07          C
ATOM   3261  CZ   TYR A 218     8.919 -14.457  29.221  1.00 18.39          C
ATOM   3262  OH   TYR A 218     7.714 -15.107  29.094  1.00 18.18          O
ATOM   3264  CE2  TYR A 218     8.922 -13.074  29.471  1.00 16.25          C
ATOM   3266  CD2  TYR A 218    10.126 -12.430  29.663  1.00 17.49          C
ATOM   3268  C    TYR A 218    14.680 -12.462  31.054  1.00 15.62          C
ATOM   3269  O    TYR A 218    15.330 -12.958  30.161  1.00 15.35          O
ATOM   3270  N    SER A 219    15.232 -11.916  32.127  1.00 13.04          N
ATOM   3272  CA   SER A 219    16.645 -11.856  32.257  1.00 13.28          C
ATOM   3274  CB   SER A 219    17.035 -10.989  33.457  1.00 11.92          C
ATOM   3277  OG   SER A 219    16.617  -9.654  33.427  1.00 12.89          O
ATOM   3279  C    SER A 219    17.258 -13.246  32.451  1.00 12.69          C
ATOM   3280  O    SER A 219    16.661 -14.118  33.110  1.00 12.81          O
ATOM   3281  N    GLU A 220    18.477 -13.441  31.935  1.00 12.84          N
ATOM   3283  CA   GLU A 220    19.219 -14.673  32.248  1.00 13.96          C
ATOM   3285  CB   GLU A 220    20.346 -14.911  31.216  1.00 13.99          C
ATOM   3288  CG   GLU A 220    19.792 -15.371  29.874  1.00 14.97          C
ATOM   3291  CD   GLU A 220    19.050 -16.686  29.940  1.00 14.37          C
ATOM   3292  OE1  GLU A 220    19.526 -17.668  30.567  1.00 19.15          O
ATOM   3293  OE2  GLU A 220    17.935 -16.745  29.418  1.00 16.51          O
ATOM   3294  C    GLU A 220    19.859 -14.410  33.602  1.00 13.13          C
ATOM   3295  O    GLU A 220    20.357 -13.309  33.829  1.00 15.70          O
ATOM   3296  N    PHE A 221    19.897 -15.423  34.458  1.00 13.83          N
ATOM   3298  CA   PHE A 221    20.510 -15.342  35.755  1.00 12.76          C
ATOM   3300  CB   PHE A 221    19.630 -15.959  36.867  1.00 13.50          C
ATOM   3303  CG   PHE A 221    18.255 -15.331  37.073  1.00 14.50          C
ATOM   3304  CD1  PHE A 221    17.866 -14.177  36.494  1.00 14.67          C
ATOM   3306  CE1  PHE A 221    16.582 -13.632  36.715  1.00 16.57          C
ATOM   3308  CZ   PHE A 221    15.774 -14.198  37.563  1.00 19.38          C
ATOM   3310  CE2  PHE A 221    16.096 -15.428  38.095  1.00 21.21          C
ATOM   3312  CD2  PHE A 221    17.347 -15.965  37.899  1.00 19.71          C
ATOM   3314  C    PHE A 221    21.824 -16.194  35.810  1.00 14.83          C
ATOM   3315  O    PHE A 221    21.863 -17.384  35.341  1.00 14.56          O
ATOM   3316  N    ILE A 222    22.805 -15.612  36.471  1.00 14.76          N
ATOM   3318  CA   ILE A 222    24.048 -16.250  36.833  1.00 16.62          C
ATOM   3320  CB   ILE A 222    25.230 -15.707  36.052  1.00 16.63          C
ATOM   3322  CG1  ILE A 222    25.070 -16.037  34.577  1.00 17.82          C
ATOM   3325  CD1  ILE A 222    26.276 -15.557  33.662  1.00 17.73          C
ATOM   3329  CG2  ILE A 222    26.547 -16.339  36.621  1.00 20.15          C
ATOM   3333  C    ILE A 222    24.291 -16.057  38.344  1.00 15.32          C
ATOM   3334  O    ILE A 222    24.409 -14.957  38.872  1.00 15.98          O
ATOM   3335  N    PHE A 223    24.359 -17.158  39.028  1.00 16.51          N
ATOM   3337  CA   PHE A 223    24.646 -17.128  40.433  1.00 17.44          C
ATOM   3339  CB   PHE A 223    23.706 -18.076  41.129  1.00 16.90          C
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Figure 5-37

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ATOM   3342  CG   PHE A 223    22.300 -17.665  40.945  1.00 18.40           C
ATOM   3343  CD1  PHE A 223    21.859 -16.502  41.537  1.00 21.10           C
ATOM   3345  CE1  PHE A 223    20.513 -16.015  41.327  1.00 20.44           C
ATOM   3347  CZ   PHE A 223    19.669 -16.728  40.505  1.00 21.68           C
ATOM   3349  CE2  PHE A 223    20.111 -17.854  39.886  1.00 23.12           C
ATOM   3351  CD2  PHE A 223    21.439 -18.327  40.095  1.00 24.21           C
ATOM   3353  C    PHE A 223    26.108 -17.586  40.541  1.00 17.76           C
ATOM   3354  O    PHE A 223    26.412 -18.771  40.567  1.00 19.75           O
ATOM   3355  N    ASN A 224    26.983 -16.588  40.557  1.00 16.51           N
ATOM   3357  CA   ASN A 224    28.408 -16.752  40.613  1.00 18.01           C
ATOM   3359  CB   ASN A 224    29.079 -15.484  40.082  1.00 17.90           C
ATOM   3362  CG   ASN A 224    30.576 -15.605  40.001  1.00 18.91           C
ATOM   3363  OD1  ASN A 224    31.276 -15.390  40.985  1.00 21.06           O
ATOM   3364  ND2  ASN A 224    31.089 -15.920  38.808  1.00 22.29           N
ATOM   3367  C    ASN A 224    28.834 -17.075  42.049  1.00 19.00           C
ATOM   3368  O    ASN A 224    28.389 -16.431  42.970  1.00 18.26           O
ATOM   3369  N    GLN A 225    29.698 -18.085  42.247  1.00 20.62           N
ATOM   3371  CA   GLN A 225    30.075 -18.493  43.613  1.00 22.31           C
ATOM   3373  CB   GLN A 225    30.629 -19.919  43.629  1.00 23.82           C
ATOM   3376  CG   GLN A 225    29.742 -21.011  43.090  1.00 26.80           C
ATOM   3379  CD   GLN A 225    28.453 -21.161  43.818  1.00 29.76           C
ATOM   3380  OE1  GLN A 225    28.421 -21.479  45.017  1.00 30.57           O
ATOM   3381  NE2  GLN A 225    27.352 -20.910  43.099  1.00 28.75           N
ATOM   3384  C    GLN A 225    31.104 -17.624  44.310  1.00 21.73           C
ATOM   3385  O    GLN A 225    31.271 -17.764  45.520  1.00 22.35           O
ATOM   3386  N    LYS A 226    31.842 -16.794  43.592  1.00 20.61           N
ATOM   3388  CA   LYS A 226    32.799 -15.902  44.223  1.00 21.01           C
ATOM   3390  CB   LYS A 226    33.677 -15.158  43.205  1.00 22.21           C
ATOM   3393  CG   LYS A 226    34.525 -16.112  42.372  1.00 24.70           C
ATOM   3396  CD   LYS A 226    35.824 -15.487  41.932  1.00 27.31           C
ATOM   3399  CE   LYS A 226    36.569 -16.446  41.031  1.00 31.56           C
ATOM   3402  NZ   LYS A 226    37.751 -15.846  40.365  1.00 34.52           N
ATOM   3406  C    LYS A 226    32.111 -14.889  45.142  1.00 19.17           C
ATOM   3407  O    LYS A 226    31.009 -14.449  44.875  1.00 17.51           O
ATOM   3408  N    LEU A 227    32.737 -14.563  46.257  1.00 16.52           N
ATOM   3410  CA   LEU A 227    32.253 -13.482  47.087  1.00 17.22           C
ATOM   3412  CB   LEU A 227    32.954 -13.417  48.461  1.00 17.23           C
ATOM   3415  CG   LEU A 227    32.658 -14.698  49.224  1.00 16.94           C
ATOM   3417  CD1  LEU A 227    33.536 -14.737  50.492  1.00 20.33           C
ATOM   3421  CD2  LEU A 227    31.257 -14.836  49.671  1.00 17.72           C
ATOM   3425  C    LEU A 227    32.543 -12.216  46.359  1.00 16.55           C
ATOM   3426  O    LEU A 227    33.529 -12.167  45.643  1.00 17.82           O
ATOM   3427  N    TRP A 228    31.733 -11.196  46.547  1.00 17.01           N
ATOM   3429  CA   TRP A 228    31.936  -9.918  45.786  1.00 18.19           C
ATOM   3431  CB   TRP A 228    30.890  -8.857  46.177  1.00 18.20           C
ATOM   3434  CG   TRP A 228    31.042  -7.572  45.517  1.00 16.62           C
ATOM   3435  CD1  TRP A 228    31.364  -6.373  46.087  1.00 18.55           C
ATOM   3437  NE1  TRP A 228    31.431  -5.402  45.117  1.00 20.27           N
ATOM   3439  CE2  TRP A 228    31.092  -5.938  43.909  1.00 17.98           C
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Figure 5-38

ATOM	3440	CD2	TRP	A	228	30.850	-7.299	44.116	1.00	16.76	C
ATOM	3441	CE3	TRP	A	228	30.457	-8.075	43.039	1.00	17.72	C
ATOM	3443	CZ3	TRP	A	228	30.403	-7.498	41.775	1.00	19.09	C
ATOM	3445	CH2	TRP	A	228	30.670	-6.137	41.584	1.00	17.61	C
ATOM	3447	CZ2	TRP	A	228	31.011	-5.329	42.629	1.00	18.27	C
ATOM	3449	C	TRP	A	228	33.393	-9.342	45.799	1.00	20.13	C
ATOM	3450	O	TRP	A	228	33.894	-9.009	44.714	1.00	19.19	O
ATOM	3451	N	PRO	A	229	34.066	-9.172	46.964	1.00	20.92	N
ATOM	3452	CA	PRO	A	229	35.435	-8.627	46.961	1.00	21.88	C
ATOM	3454	CB	PRO	A	229	35.783	-8.555	48.456	1.00	22.44	C
ATOM	3457	CG	PRO	A	229	34.449	-8.494	49.142	1.00	23.36	C
ATOM	3460	CD	PRO	A	229	33.601	-9.413	48.332	1.00	20.09	C
ATOM	3463	C	PRO	A	229	36.432	-9.482	46.148	1.00	21.54	C
ATOM	3464	O	PRO	A	229	37.523	-8.977	45.803	1.00	23.91	O
ATOM	3465	N	ASP	A	230	36.072	-10.718	45.796	1.00	20.21	N
ATOM	3467	CA	ASP	A	230	36.931	-11.565	44.987	1.00	20.59	C
ATOM	3469	CB	ASP	A	230	36.895	-13.042	45.451	1.00	19.78	C
ATOM	3472	CG	ASP	A	230	37.447	-13.239	46.852	1.00	21.05	C
ATOM	3473	OD1	ASP	A	230	38.441	-12.594	47.154	1.00	21.15	O
ATOM	3474	OD2	ASP	A	230	36.917	-13.984	47.698	1.00	20.21	O
ATOM	3475	C	ASP	A	230	36.517	-11.529	43.522	1.00	20.75	C
ATOM	3476	O	ASP	A	230	37.176	-12.144	42.659	1.00	21.42	O
ATOM	3477	N	PHE	A	231	35.384	-10.874	43.237	1.00	19.89	N
ATOM	3479	CA	PHE	A	231	34.868	-10.794	41.870	1.00	20.25	C
ATOM	3481	CB	PHE	A	231	33.406	-10.376	41.890	1.00	18.89	C
ATOM	3484	CG	PHE	A	231	32.652	-10.598	40.584	1.00	17.28	C
ATOM	3485	CD1	PHE	A	231	32.401	-9.542	39.722	1.00	18.12	C
ATOM	3487	CE1	PHE	A	231	31.708	-9.749	38.569	1.00	18.75	C
ATOM	3489	CZ	PHE	A	231	31.200	-11.024	38.248	1.00	16.55	C
ATOM	3491	CE2	PHE	A	231	31.444	-12.063	39.082	1.00	20.51	C
ATOM	3493	CD2	PHE	A	231	32.154	-11.844	40.254	1.00	18.64	C
ATOM	3495	C	PHE	A	231	35.754	-9.796	41.135	1.00	21.09	C
ATOM	3496	O	PHE	A	231	36.143	-8.774	41.687	1.00	24.24	O
ATOM	3497	N	ASP	A	232	36.197	-10.185	39.943	1.00	23.02	N
ATOM	3499	CA	ASP	A	232	37.131	-9.376	39.190	1.00	24.11	C
ATOM	3501	CB	ASP	A	232	38.598	-9.845	39.413	1.00	24.14	C
ATOM	3504	CG	ASP	A	232	38.874	-11.249	38.963	1.00	25.04	C
ATOM	3505	OD1	ASP	A	232	38.135	-11.855	38.160	1.00	21.94	O
ATOM	3506	OD2	ASP	A	232	39.896	-11.872	39.359	1.00	30.24	O
ATOM	3507	C	ASP	A	232	36.803	-9.303	37.696	1.00	25.60	C
ATOM	3508	O	ASP	A	232	35.825	-9.904	37.223	1.00	24.87	O
ATOM	3509	N	GLU	A	233	37.647	-8.588	36.970	1.00	25.37	N
ATOM	3511	CA	GLU	A	233	37.460	-8.422	35.515	1.00	26.59	C
ATOM	3513	CB	GLU	A	233	38.650	-7.680	34.920	1.00	27.13	C
ATOM	3516	CG	GLU	A	233	38.688	-6.226	35.365	1.00	30.62	C
ATOM	3519	CD	GLU	A	233	39.654	-5.942	36.510	1.00	33.39	C
ATOM	3520	OE1	GLU	A	233	39.794	-6.798	37.422	1.00	33.08	O
ATOM	3521	OE2	GLU	A	233	40.219	-4.835	36.491	1.00	28.43	O
ATOM	3522	C	GLU	A	233	37.285	-9.755	34.833	1.00	25.04	C

Figure 5-39

ATOM	3523	O	GLU	A	233	36.360	-9.958	34.047	1.00	24.40	O
ATOM	3524	N	ASP	A	234	38.153	-10.703	35.146	1.00	25.47	N
ATOM	3526	CA	ASP	A	234	38.086	-11.996	34.518	1.00	24.83	C
ATOM	3528	CB	ASP	A	234	39.348	-12.821	34.776	1.00	27.09	C
ATOM	3531	CG	ASP	A	234	40.580	-12.251	34.016	1.00	29.02	C
ATOM	3532	OD1	ASP	A	234	40.440	-11.758	32.891	1.00	38.07	O
ATOM	3533	OD2	ASP	A	234	41.724	-12.209	34.464	1.00	34.87	O
ATOM	3534	C	ASP	A	234	36.808	-12.782	34.811	1.00	24.62	C
ATOM	3535	O	ASP	A	234	36.261	-13.470	33.897	1.00	22.52	O
ATOM	3536	N	GLU	A	235	36.342	-12.720	36.070	1.00	22.13	N
ATOM	3538	CA	GLU	A	235	35.082	-13.355	36.429	1.00	21.63	C
ATOM	3540	CB	GLU	A	235	34.806	-13.251	37.946	1.00	20.42	C
ATOM	3543	CG	GLU	A	235	33.907	-14.363	38.450	1.00	18.84	C
ATOM	3546	CD	GLU	A	235	34.498	-15.749	38.323	1.00	22.29	C
ATOM	3547	OE1	GLU	A	235	35.741	-15.857	38.140	1.00	24.43	O
ATOM	3548	OE2	GLU	A	235	33.741	-16.724	38.344	1.00	21.68	O
ATOM	3549	C	GLU	A	235	33.896	-12.770	35.611	1.00	19.41	C
ATOM	3550	O	GLU	A	235	33.023	-13.509	35.182	1.00	20.14	O
ATOM	3551	N	LEU	A	236	33.853	-11.453	35.422	1.00	19.36	N
ATOM	3553	CA	LEU	A	236	32.819	-10.831	34.628	1.00	20.06	C
ATOM	3555	CB	LEU	A	236	32.917	-9.337	34.637	1.00	20.11	C
ATOM	3558	CG	LEU	A	236	31.814	-8.667	33.805	1.00	23.04	C
ATOM	3560	CD1	LEU	A	236	30.487	-8.833	34.495	1.00	20.12	C
ATOM	3564	CD2	LEU	A	236	32.127	-7.196	33.545	1.00	24.97	C
ATOM	3568	C	LEU	A	236	32.811	-11.342	33.161	1.00	20.82	C
ATOM	3569	O	LEU	A	236	31.779	-11.673	32.607	1.00	19.88	O
ATOM	3570	N	ILE	A	237	33.991	-11.439	32.570	1.00	20.29	N
ATOM	3572	CA	ILE	A	237	34.088	-11.984	31.241	1.00	20.52	C
ATOM	3574	CB	ILE	A	237	35.535	-11.869	30.736	1.00	20.17	C
ATOM	3576	CG1	ILE	A	237	35.973	-10.437	30.725	1.00	21.96	C
ATOM	3579	CD1	ILE	A	237	35.284	-9.549	29.781	1.00	23.17	C
ATOM	3583	CG2	ILE	A	237	35.687	-12.516	29.372	1.00	20.41	C
ATOM	3587	C	ILE	A	237	33.623	-13.408	31.195	1.00	19.83	C
ATOM	3588	O	ILE	A	237	32.954	-13.805	30.272	1.00	21.67	O
ATOM	3589	N	LYS	A	238	33.982	-14.228	32.170	1.00	21.01	N
ATOM	3591	CA	LYS	A	238	33.475	-15.591	32.196	1.00	20.77	C
ATOM	3593	CB	LYS	A	238	34.033	-16.351	33.387	1.00	22.98	C
ATOM	3596	CG	LYS	A	238	35.567	-16.387	33.418	1.00	29.03	C
ATOM	3599	CD	LYS	A	238	36.167	-16.630	34.836	1.00	35.34	C
ATOM	3602	CE	LYS	A	238	35.878	-18.005	35.408	1.00	36.70	C
ATOM	3605	NZ	LYS	A	238	36.506	-18.218	36.817	1.00	38.95	N
ATOM	3609	C	LYS	A	238	31.927	-15.620	32.305	1.00	19.64	C
ATOM	3610	O	LYS	A	238	31.258	-16.464	31.738	1.00	19.66	O
ATOM	3611	N	CYS	A	239	31.377	-14.693	33.077	1.00	19.50	N
ATOM	3613	CA	CYS	A	239	29.928	-14.593	33.176	1.00	19.36	C
ATOM	3615	CB	CYS	A	239	29.598	-13.528	34.228	1.00	19.01	C
ATOM	3618	SG	CYS	A	239	29.835	-14.128	35.949	1.00	21.25	S
ATOM	3619	C	CYS	A	239	29.291	-14.217	31.828	1.00	18.46	C
ATOM	3620	O	CYS	A	239	28.247	-14.736	31.441	1.00	18.38	O

Figure 5-40

ATOM	3621	N	ILE A 240	29.887	-13.262	31.148	1.00	19.63	N
ATOM	3623	CA	ILE A 240	29.365	-12.845	29.834	1.00	19.74	C
ATOM	3625	CB	ILE A 240	30.101	-11.645	29.321	1.00	19.44	C
ATOM	3627	CG1	ILE A 240	29.815	-10.456	30.214	1.00	21.51	C
ATOM	3630	CD1	ILE A 240	30.478	-9.212	29.810	1.00	23.28	C
ATOM	3634	CG2	ILE A 240	29.715	-11.314	27.930	1.00	20.44	C
ATOM	3638	C	ILE A 240	29.420	-14.010	28.851	1.00	20.46	C
ATOM	3639	O	ILE A 240	28.477	-14.225	28.090	1.00	18.92	O
ATOM	3640	N	LYS A 241	30.499	-14.787	28.925	1.00	20.23	N
ATOM	3642	CA	LYS A 241	30.663	-15.981	28.094	1.00	21.54	C
ATOM	3644	CB	LYS A 241	32.031	-16.621	28.344	1.00	23.92	C
ATOM	3647	CG	LYS A 241	32.442	-17.723	27.364	1.00	29.41	C
ATOM	3650	CD	LYS A 241	33.959	-18.098	27.572	1.00	35.42	C
ATOM	3653	CE	LYS A 241	34.960	-17.003	27.139	1.00	39.23	C
ATOM	3656	NZ	LYS A 241	36.429	-17.318	27.559	1.00	43.58	N
ATOM	3660	C	LYS A 241	29.579	-16.966	28.377	1.00	21.27	C
ATOM	3661	O	LYS A 241	28.963	-17.526	27.453	1.00	19.09	O
ATOM	3662	N	ILE A 242	29.283	-17.175	29.660	1.00	20.22	N
ATOM	3664	CA	ILE A 242	28.223	-18.111	30.014	1.00	19.74	C
ATOM	3666	CB	ILE A 242	28.101	-18.293	31.538	1.00	20.05	C
ATOM	3668	CG1	ILE A 242	29.242	-19.141	32.053	1.00	21.50	C
ATOM	3671	CD1	ILE A 242	29.358	-19.214	33.562	1.00	21.34	C
ATOM	3675	CG2	ILE A 242	26.704	-18.847	31.887	1.00	19.73	C
ATOM	3679	C	ILE A 242	26.924	-17.550	29.443	1.00	18.93	C
ATOM	3680	O	ILE A 242	26.120	-18.270	28.859	1.00	18.46	O
ATOM	3681	N	TYR A 243	26.697	-16.247	29.635	1.00	17.59	N
ATOM	3683	CA	TYR A 243	25.506	-15.626	29.097	1.00	17.03	C
ATOM	3685	CB	TYR A 243	25.515	-14.107	29.393	1.00	18.54	C
ATOM	3688	CG	TYR A 243	24.487	-13.382	28.540	1.00	16.47	C
ATOM	3689	CD1	TYR A 243	23.128	-13.435	28.853	1.00	14.87	C
ATOM	3691	CE1	TYR A 243	22.154	-12.786	28.060	1.00	14.43	C
ATOM	3693	CZ	TYR A 243	22.545	-12.140	26.931	1.00	18.52	C
ATOM	3694	OH	TYR A 243	21.584	-11.601	26.142	1.00	15.59	O
ATOM	3696	CE2	TYR A 243	23.875	-12.120	26.557	1.00	17.47	C
ATOM	3698	CD2	TYR A 243	24.851	-12.721	27.382	1.00	18.49	C
ATOM	3700	C	TYR A 243	25.306	-15.899	27.580	1.00	17.74	C
ATOM	3701	O	TYR A 243	24.198	-16.238	27.103	1.00	16.28	O
ATOM	3702	N	GLN A 244	26.376	-15.770	26.815	1.00	18.16	N
ATOM	3704	CA	GLN A 244	26.285	-15.914	25.360	1.00	18.81	C
ATOM	3706	CB	GLN A 244	27.621	-15.427	24.714	1.00	18.50	C
ATOM	3709	CG	GLN A 244	27.791	-13.865	24.815	1.00	17.89	C
ATOM	3712	CD	GLN A 244	29.053	-13.324	24.121	1.00	19.24	C
ATOM	3713	OE1	GLN A 244	29.156	-12.139	23.806	1.00	22.54	O
ATOM	3714	NE2	GLN A 244	30.008	-14.178	23.934	1.00	22.15	N
ATOM	3717	C	GLN A 244	25.872	-17.302	24.915	1.00	20.22	C
ATOM	3718	O	GLN A 244	25.436	-17.510	23.768	1.00	21.47	O
ATOM	3719	N	SER A 245	26.040	-18.273	25.794	1.00	19.88	N
ATOM	3721	CA	SER A 245	25.692	-19.630	25.518	1.00	21.03	C
ATOM	3723	CB	SER A 245	26.577	-20.531	26.343	1.00	23.16	C

Figure 5-41

ATOM	3726	OG	SER A 245	26.150	-20.564	27.745	1.00	28.07	O
ATOM	3728	C	SER A 245	24.251	-19.943	25.853	1.00	21.10	C
ATOM	3729	O	SER A 245	23.754	-21.017	25.521	1.00	19.69	O
ATOM	3730	N	ARG A 246	23.594	-19.044	26.589	1.00	19.29	N
ATOM	3732	CA	ARG A 246	22.207	-19.308	26.944	1.00	18.84	C
ATOM	3734	CB	ARG A 246	21.771	-18.321	27.998	1.00	20.45	C
ATOM	3737	CG	ARG A 246	22.576	-18.384	29.256	1.00	17.50	C
ATOM	3740	CD	ARG A 246	22.226	-19.593	30.108	1.00	19.65	C
ATOM	3743	NE	ARG A 246	22.959	-19.651	31.371	1.00	18.24	N
ATOM	3745	CZ	ARG A 246	22.573	-19.030	32.488	1.00	18.27	C
ATOM	3746	NH1	ARG A 246	21.503	-18.262	32.496	1.00	15.88	N
ATOM	3749	NH2	ARG A 246	23.271	-19.167	33.608	1.00	17.71	N
ATOM	3752	C	ARG A 246	21.296	-19.200	25.728	1.00	20.45	C
ATOM	3753	O	ARG A 246	21.556	-18.385	24.852	1.00	20.25	O
ATOM	3754	N	GLN A 247	20.243	-20.011	25.671	1.00	19.33	N
ATOM	3756	CA	GLN A 247	19.293	-20.002	24.569	1.00	19.81	C
ATOM	3758	CB	GLN A 247	19.007	-21.468	24.167	1.00	20.03	C
ATOM	3761	CG	GLN A 247	20.292	-22.247	23.814	1.00	25.50	C
ATOM	3764	CD	GLN A 247	20.934	-21.738	22.535	1.00	34.35	C
ATOM	3765	OE1	GLN A 247	22.145	-21.387	22.508	1.00	38.94	O
ATOM	3766	NE2	GLN A 247	20.134	-21.677	21.471	1.00	32.88	N
ATOM	3769	C	GLN A 247	18.040	-19.269	25.030	1.00	18.59	C
ATOM	3770	O	GLN A 247	17.243	-19.821	25.785	1.00	18.17	O
ATOM	3771	N	ARG A 248	17.871	-18.008	24.618	1.00	15.34	N
ATOM	3773	CA	ARG A 248	16.759	-17.219	25.106	1.00	16.50	C
ATOM	3775	CB	ARG A 248	17.151	-15.758	25.124	1.00	17.26	C
ATOM	3778	CG	ARG A 248	18.500	-15.510	25.856	1.00	18.94	C
ATOM	3781	CD	ARG A 248	18.840	-14.053	25.911	1.00	20.88	C
ATOM	3784	NE	ARG A 248	17.970	-13.462	26.907	1.00	23.36	N
ATOM	3786	CZ	ARG A 248	17.708	-12.156	27.027	1.00	28.62	C
ATOM	3787	NH1	ARG A 248	18.165	-11.272	26.134	1.00	22.79	N
ATOM	3790	NH2	ARG A 248	16.913	-11.747	28.009	1.00	27.91	N
ATOM	3793	C	ARG A 248	15.546	-17.443	24.201	1.00	17.65	C
ATOM	3794	O	ARG A 248	15.691	-17.381	22.958	1.00	17.79	O
ATOM	3795	N	ARG A 249	14.386	-17.651	24.798	1.00	17.10	N
ATOM	3797	CA	ARG A 249	13.160	-17.962	24.041	1.00	17.98	C
ATOM	3799	CB	ARG A 249	12.733	-19.398	24.301	1.00	18.16	C
ATOM	3802	CG	ARG A 249	13.777	-20.387	23.745	1.00	19.25	C
ATOM	3805	CD	ARG A 249	13.394	-21.836	23.806	1.00	21.98	C
ATOM	3808	NE	ARG A 249	13.646	-22.456	25.103	1.00	27.22	N
ATOM	3810	CZ	ARG A 249	14.793	-23.012	25.447	1.00	27.68	C
ATOM	3811	NH1	ARG A 249	15.815	-23.005	24.604	1.00	27.19	N
ATOM	3814	NH2	ARG A 249	14.898	-23.591	26.632	1.00	29.40	N
ATOM	3817	C	ARG A 249	11.971	-17.051	24.173	1.00	18.34	C
ATOM	3818	O	ARG A 249	11.119	-17.011	23.265	1.00	16.92	O
ATOM	3819	N	PHE A 250	11.864	-16.342	25.297	1.00	18.11	N
ATOM	3821	CA	PHE A 250	10.798	-15.366	25.521	1.00	18.50	C
ATOM	3823	CB	PHE A 250	11.010	-14.149	24.593	1.00	18.85	C
ATOM	3826	CG	PHE A 250	12.406	-13.613	24.653	1.00	21.51	C
ATOM	3827	CD1	PHE A 250	12.819	-12.853	25.744	1.00	20.03	C
ATOM	3829	CE1	PHE A 250	14.157	-12.402	25.820	1.00	24.51	C
ATOM	3831	CZ	PHE A 250	15.046	-12.731	24.854	1.00	24.30	C

Figure 5-42

ATOM	3833	CE2	PHE	A	250	14.654	-13.495	23.774	1.00	25.65	C
ATOM	3835	CD2	PHE	A	250	13.339	-13.958	23.695	1.00	25.24	C
ATOM	3837	C	PHE	A	250	9.393	-15.962	25.375	1.00	18.97	C
ATOM	3838	O	PHE	A	250	8.475	-15.296	24.896	1.00	19.60	O
ATOM	3839	N	GLY	A	251	9.233	-17.243	25.737	1.00	18.74	N
ATOM	3841	CA	GLY	A	251	7.952	-17.883	25.707	1.00	17.68	C
ATOM	3844	C	GLY	A	251	7.678	-18.671	24.427	1.00	19.01	C
ATOM	3845	O	GLY	A	251	6.716	-19.437	24.396	1.00	17.74	O
ATOM	3846	N	GLY	A	252	8.559	-18.521	23.444	1.00	20.08	N
ATOM	3848	CA	GLY	A	252	8.400	-19.146	22.132	1.00	20.97	C
ATOM	3851	C	GLY	A	252	9.316	-20.333	22.019	1.00	21.61	C
ATOM	3852	O	GLY	A	252	9.794	-20.875	23.025	1.00	19.17	O
ATOM	3853	N	LEU	A	253	9.562	-20.762	20.784	1.00	20.83	N
ATOM	3855	CA	LEU	A	253	10.398	-21.911	20.560	1.00	21.55	C
ATOM	3857	CB	LEU	A	253	9.757	-22.951	19.605	1.00	20.69	C
ATOM	3860	CG	LEU	A	253	8.343	-23.447	19.891	1.00	22.26	C
ATOM	3862	CD1	LEU	A	253	7.998	-24.557	18.900	1.00	24.29	C
ATOM	3866	CD2	LEU	A	253	8.173	-23.977	21.364	1.00	19.64	C
ATOM	3870	C	LEU	A	253	11.710	-21.423	19.996	1.00	24.06	C
ATOM	3871	O	LEU	A	253	11.804	-20.355	19.424	1.00	25.75	O
ATOM	3872	N	SER	A	254	12.735	-22.196	20.224	1.00	27.07	N
ATOM	3874	CA	SER	A	254	14.054	-21.935	19.674	1.00	29.97	C
ATOM	3876	CB	SER	A	254	15.112	-22.715	20.463	1.00	30.67	C
ATOM	3879	OG	SER	A	254	15.578	-22.007	21.640	1.00	30.26	O
ATOM	3881	C	SER	A	254	13.971	-22.452	18.236	1.00	32.30	C
ATOM	3882	O	SER	A	254	13.092	-23.258	17.912	1.00	31.98	O
ATOM	3883	N	GLU	A	255	14.874	-21.990	17.376	1.00	35.30	N
ATOM	3885	CA	GLU	A	255	14.856	-22.383	15.964	1.00	37.74	C
ATOM	3887	CB	GLU	A	255	15.932	-21.594	15.185	1.00	38.66	C
ATOM	3890	CG	GLU	A	255	15.820	-20.090	15.425	1.00	41.46	C
ATOM	3893	CD	GLU	A	255	16.325	-19.210	14.286	1.00	47.45	C
ATOM	3894	OE1	GLU	A	255	16.885	-19.726	13.284	1.00	52.64	O
ATOM	3895	OE2	GLU	A	255	16.168	-17.975	14.400	1.00	50.98	O
ATOM	3896	C	GLU	A	255	15.005	-23.902	15.778	1.00	38.42	C
ATOM	3897	O	GLU	A	255	15.579	-24.600	16.624	1.00	37.87	O
ATOM	3898	N	GLU	A	256	14.451	-24.448	14.693	1.00	39.64	N
ATOM	3900	CA	GLU	A	256	14.648	-25.883	14.473	1.00	40.53	C
ATOM	3902	CB	GLU	A	256	13.723	-26.452	13.380	1.00	40.46	C
ATOM	3905	CG	GLU	A	256	12.270	-26.596	13.864	1.00	41.03	C
ATOM	3908	CD	GLU	A	256	11.997	-27.895	14.620	1.00	41.28	C
ATOM	3909	OE1	GLU	A	256	12.950	-28.652	14.918	1.00	39.86	O
ATOM	3910	OE2	GLU	A	256	10.824	-28.153	14.934	1.00	40.76	O
ATOM	3911	C	GLU	A	256	16.143	-26.127	14.168	1.00	41.41	C
ATOM	3912	O	GLU	A	256	16.750	-27.060	14.733	1.00	43.09	O
ATOM	3913	OXT	GLU	A	256	16.785	-25.413	13.396	1.00	39.80	O
ATOM	3914	MG	MG	M	1	24.402	-10.895	51.726	1.00	17.72	MG
ATOM	3915	S	SO4	S	901	19.470	-11.342	51.217	1.00	18.01	S
ATOM	3916	O1	SO4	S	901	19.973	-10.251	50.420	1.00	16.95	O
ATOM	3917	O2	SO4	S	901	18.379	-12.038	50.587	1.00	16.47	O

Figure 5-43

ATOM	3918	O3	SO4	S	901	18.991	-10.911	52.570	1.00	17.36	O
ATOM	3919	O4	SO4	S	901	20.548	-12.266	51.441	1.00	19.77	O
ATOM	3920	O1B	FPP	F	999	28.376	-12.033	53.033	1.00	19.79	O
ATOM	3921	PB	FPP	F	999	27.113	-11.258	53.233	1.00	21.01	P
ATOM	3922	O2B	FPP	F	999	25.882	-11.938	52.655	1.00	23.30	O
ATOM	3924	O3B	FPP	F	999	26.872	-10.808	54.632	1.00	24.58	O
ATOM	3926	O3A	FPP	F	999	27.401	-9.878	52.532	1.00	19.69	O
ATOM	3927	PA	FPP	F	999	26.569	-8.650	52.316	1.00	20.20	P
ATOM	3928	O1A	FPP	F	999	26.865	-7.561	53.347	1.00	18.02	O
ATOM	3929	O2A	FPP	F	999	25.087	-9.038	52.264	1.00	15.47	O
ATOM	3931	O1	FPP	F	999	26.996	-8.086	50.939	1.00	19.51	O
ATOM	3932	C1	FPP	F	999	26.190	-7.124	50.209	1.00	23.76	C
ATOM	3935	C2	FPP	F	999	26.789	-5.771	49.974	1.00	27.70	C
ATOM	3937	C3	FPP	F	999	26.041	-4.697	49.771	1.00	34.57	C
ATOM	3938	C4	FPP	F	999	24.546	-4.813	49.692	1.00	39.88	C
ATOM	3942	C5	FPP	F	999	26.518	-3.274	49.546	1.00	38.78	C
ATOM	3945	C6	FPP	F	999	27.888	-2.810	49.919	1.00	37.03	C
ATOM	3948	C7	FPP	F	999	27.806	-1.544	49.114	1.00	36.76	C
ATOM	3950	C8	FPP	F	999	28.808	-0.756	48.788	1.00	40.82	C
ATOM	3951	C10	FPP	F	999	30.198	-1.044	49.268	1.00	42.60	C
ATOM	3955	C9	FPP	F	999	28.382	0.410	47.930	1.00	42.71	C
ATOM	3958	C11	FPP	F	999	29.208	1.658	47.877	1.00	44.36	C
ATOM	3961	C12	FPP	F	999	28.296	2.686	47.229	1.00	45.96	C
ATOM	3963	C13	FPP	F	999	28.669	3.466	46.212	1.00	47.78	C
ATOM	3964	C15	FPP	F	999	29.931	3.291	45.446	1.00	46.95	C
ATOM	3968	C14	FPP	F	999	27.770	4.582	45.770	1.00	49.85	C
ATOM	3972	O	HOH	Y	1	23.313	-11.049	53.402	1.00	20.47	O
ATOM	3973	O	HOH	Y	2	23.250	-12.575	51.192	1.00	21.44	O
ATOM	3974	O	HOH	Y	3	20.827	-9.512	53.986	1.00	17.71	O
ATOM	3975	O	HOH	Y	4	22.702	-9.879	50.685	1.00	18.03	O
ATOM	3976	O	HOH	W	1	13.554	-9.050	31.328	1.00	16.05	O
ATOM	3979	O	HOH	W	2	18.797	-20.238	31.134	1.00	15.63	O
ATOM	3982	O	HOH	W	3	10.787	-3.727	40.028	1.00	19.33	O
ATOM	3985	O	HOH	W	4	16.866	-13.710	52.157	1.00	15.96	O
ATOM	3988	O	HOH	W	5	7.680	-9.956	30.645	1.00	21.10	O
ATOM	3991	O	HOH	W	6	15.854	-9.310	29.847	1.00	18.77	O
ATOM	3994	O	HOH	W	7	14.610	-1.450	32.566	1.00	19.52	O
ATOM	3997	O	HOH	W	8	20.632	-8.068	23.642	1.00	21.10	O
ATOM	4000	O	HOH	W	9	12.112	-7.678	29.443	1.00	22.56	O
ATOM	4003	O	HOH	W	10	20.061	-7.807	50.674	1.00	20.15	O
ATOM	4006	O	HOH	W	11	25.142	-16.426	43.634	1.00	17.77	O
ATOM	4009	O	HOH	W	12	29.663	-18.260	37.334	1.00	21.64	O
ATOM	4012	O	HOH	W	13	24.691	-2.457	21.480	1.00	20.52	O
ATOM	4015	O	HOH	W	14	20.052	9.325	38.406	1.00	24.32	O
ATOM	4018	O	HOH	W	15	31.285	-3.416	22.253	1.00	27.18	O
ATOM	4021	O	HOH	W	16	15.623	5.663	33.972	1.00	22.83	O

Figure 5-44

ATOM	4024	O	HOH W	17	29.817	1.759	27.213	1.00	23.21	O
ATOM	4027	O	HOH W	18	25.598	-21.416	34.586	1.00	32.69	O
ATOM	4030	O	HOH W	19	37.814	-14.883	50.040	1.00	22.89	O
ATOM	4033	O	HOH W	20	25.835	3.937	27.521	1.00	20.57	O
ATOM	4036	O	HOH W	21	30.573	-16.932	23.338	1.00	24.29	O
ATOM	4039	O	HOH W	22	19.015	-4.622	25.220	1.00	22.62	O
ATOM	4042	O	HOH W	23	30.724	-19.405	39.910	1.00	24.66	O
ATOM	4045	O	HOH W	24	32.257	1.783	25.995	1.00	24.75	O
ATOM	4048	O	HOH W	25	35.164	-15.904	46.795	1.00	22.69	O
ATOM	4051	O	HOH W	26	32.317	-5.326	20.719	1.00	24.73	O
ATOM	4054	O	HOH W	27	11.042	-2.349	32.597	1.00	21.09	O
ATOM	4057	O	HOH W	28	11.617	0.284	32.894	1.00	21.57	O
ATOM	4060	O	HOH W	29	21.898	-19.939	51.879	1.00	21.55	O
ATOM	4063	O	HOH W	30	14.058	-14.169	34.194	1.00	17.95	O
ATOM	4066	O	HOH W	31	15.917	-15.155	28.554	1.00	17.04	O
ATOM	4069	O	HOH W	32	2.475	-10.516	31.120	1.00	18.73	O
ATOM	4072	O	HOH W	33	26.062	7.943	28.903	1.00	25.77	O
ATOM	4075	O	HOH W	34	-0.543	-7.027	30.010	1.00	31.49	O
ATOM	4078	O	HOH W	35	12.149	-24.737	21.402	1.00	26.93	O
ATOM	4081	O	HOH W	36	23.820	1.896	21.363	1.00	26.86	O
ATOM	4084	O	HOH W	37	19.836	-24.443	41.962	1.00	18.28	O
ATOM	4087	O	HOH W	38	32.644	-16.354	56.029	1.00	28.72	O
ATOM	4090	O	HOH W	39	26.212	-3.793	23.123	1.00	22.27	O
ATOM	4093	O	HOH W	40	32.366	4.468	29.120	1.00	26.39	O
ATOM	4096	O	HOH W	41	29.971	-3.791	47.450	1.00	30.40	O
ATOM	4099	O	HOH W	42	19.104	-11.893	23.940	1.00	25.36	O
ATOM	4102	O	HOH W	43	18.193	7.384	37.013	1.00	31.69	O
ATOM	4105	O	HOH W	44	35.950	-0.047	24.188	1.00	27.81	O
ATOM	4108	O	HOH W	45	40.392	8.489	39.399	1.00	30.80	O
ATOM	4111	O	HOH W	46	28.385	4.369	63.297	1.00	30.77	O
ATOM	4114	O	HOH W	47	29.114	-3.307	61.510	1.00	31.70	O
ATOM	4117	O	HOH W	48	19.531	-17.084	22.607	1.00	22.10	O
ATOM	4120	O	HOH W	49	17.604	7.911	42.347	1.00	32.51	O
ATOM	4123	O	HOH W	50	20.055	-4.772	63.588	1.00	29.92	O
ATOM	4126	O	HOH W	51	24.808	11.941	35.425	1.00	23.22	O
ATOM	4129	O	HOH W	52	9.660	-8.982	28.818	1.00	32.56	O
ATOM	4132	O	HOH W	53	23.677	5.214	26.599	1.00	24.47	O
ATOM	4135	O	HOH W	54	16.457	-2.305	34.563	1.00	22.90	O
ATOM	4138	O	HOH W	55	22.364	-10.524	23.927	1.00	25.15	O
ATOM	4141	O	HOH W	56	24.819	-21.382	44.230	1.00	28.57	O
ATOM	4144	O	HOH W	57	15.440	6.944	40.805	1.00	30.44	O
ATOM	4147	O	HOH W	58	25.976	-1.070	65.387	1.00	24.91	O
ATOM	4150	O	HOH W	59	33.452	-18.763	39.829	1.00	32.17	O
ATOM	4153	O	HOH W	60	28.131	-20.142	36.740	1.00	36.39	O
ATOM	4156	O	HOH W	61	10.277	-4.565	28.763	1.00	26.72	O
ATOM	4159	O	HOH W	62	24.521	-10.754	55.710	1.00	22.10	O
ATOM	4162	O	HOH W	63	30.024	3.202	61.463	1.00	25.62	O
ATOM	4165	O	HOH W	64	8.046	-19.428	18.768	1.00	31.72	O
ATOM	4168	O	HOH W	65	22.124	-15.298	25.264	1.00	23.76	O

Figure 5-45

ATOM	4171	O	HOH W	66	9.340	-0.625	26.649	1.00	33.77	O
ATOM	4174	O	HOH W	67	22.150	-20.929	47.436	1.00	22.53	O
ATOM	4177	O	HOH W	68	10.935	-2.713	53.093	1.00	30.90	O
ATOM	4180	O	HOH W	69	33.990	-11.990	18.450	1.00	32.26	O
ATOM	4183	O	HOH W	70	29.560	-18.591	25.178	1.00	31.08	O
ATOM	4186	O	HOH W	71	5.386	-9.782	29.237	1.00	25.46	O
ATOM	4189	O	HOH W	72	30.818	-18.884	47.765	1.00	33.72	O
ATOM	4192	O	HOH W	73	32.720	-19.019	31.299	1.00	33.74	O
ATOM	4195	O	HOH W	74	11.308	-23.395	15.836	1.00	31.09	O
ATOM	4198	O	HOH W	75	28.678	-2.741	22.843	1.00	27.62	O
ATOM	4201	O	HOH W	76	40.782	-10.225	36.484	1.00	30.77	O
ATOM	4204	O	HOH W	77	13.064	0.481	31.085	1.00	26.78	O
ATOM	4207	O	HOH W	78	36.980	2.981	55.991	1.00	30.14	O
ATOM	4210	O	HOH W	79	17.609	-6.759	50.465	1.00	31.64	O
ATOM	4213	O	HOH W	80	6.075	-6.166	28.915	1.00	24.11	O
ATOM	4216	O	HOH W	81	37.218	-17.210	45.282	1.00	28.55	O
ATOM	4219	O	HOH W	82	31.430	13.439	44.059	1.00	30.71	O
ATOM	4222	O	HOH W	83	11.061	-11.145	39.944	1.00	45.28	O
ATOM	4225	O	HOH W	84	13.995	-3.709	27.604	1.00	30.24	O
ATOM	4228	O	HOH W	85	-8.547	14.167	34.457	1.00	41.17	O
ATOM	4231	O	HOH W	86	12.154	-1.563	29.674	1.00	29.34	O
ATOM	4234	O	HOH W	87	40.567	0.285	31.901	1.00	39.11	O
ATOM	4237	O	HOH W	88	18.416	-2.791	21.845	1.00	30.88	O
ATOM	4240	O	HOH W	89	20.045	0.302	61.898	1.00	24.40	O
ATOM	4243	O	HOH W	90	21.244	8.081	26.469	1.00	39.02	O
ATOM	4246	O	HOH W	91	23.587	6.698	66.965	1.00	34.37	O
ATOM	4249	O	HOH W	92	-3.668	12.465	40.745	1.00	39.57	O
ATOM	4252	O	HOH W	93	36.621	2.042	28.430	1.00	35.94	O
ATOM	4255	O	HOH W	94	40.898	-3.589	33.858	1.00	34.53	O
ATOM	4258	O	HOH W	95	40.576	-14.574	47.625	1.00	36.03	O
ATOM	4261	O	HOH W	96	0.613	9.514	30.164	1.00	36.36	O
ATOM	4264	O	HOH W	97	11.628	-17.713	20.705	1.00	34.25	O
ATOM	4267	O	HOH W	98	24.954	7.668	25.927	1.00	27.16	O
ATOM	4270	O	HOH W	99	15.390	7.025	38.027	1.00	29.40	O
ATOM	4273	O	HOH W	100	22.625	-6.941	49.347	1.00	39.05	O
ATOM	4276	O	HOH W	101	8.373	-22.481	15.596	1.00	33.81	O
ATOM	4279	O	HOH W	102	30.369	5.278	59.776	1.00	33.74	O
ATOM	4282	O	HOH W	103	41.338	-2.707	37.675	1.00	29.29	O
ATOM	4285	O	HOH W	104	28.791	-11.742	59.148	1.00	39.32	O
ATOM	4288	O	HOH W	105	11.634	-26.143	18.788	1.00	36.81	O
ATOM	4291	O	HOH W	106	7.819	-7.870	52.253	1.00	39.46	O
ATOM	4294	O	HOH W	107	-1.143	11.518	42.825	1.00	38.53	O
ATOM	4297	O	HOH W	108	31.520	-20.537	29.068	1.00	38.06	O
ATOM	4300	O	HOH W	109	22.086	-13.744	23.178	1.00	31.44	O
ATOM	4303	O	HOH W	110	17.540	7.963	34.347	1.00	37.52	O
ATOM	4306	O	HOH W	111	27.137	-14.592	21.279	1.00	36.32	O
ATOM	4309	O	HOH W	112	38.263	-8.490	43.290	1.00	30.71	O
ATOM	4312	O	HOH W	113	30.318	-16.409	57.852	1.00	34.64	O
ATOM	4315	O	HOH W	114	17.107	-8.449	25.688	1.00	35.92	O

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ATOM   4318  O   HOH W 115    25.866 -13.362  18.161  1.00 36.61           O
ATOM   4321  O   HOH W 116    13.281   4.205  52.743  1.00 42.27           O
ATOM   4324  O   HOH W 117    38.297   4.475  47.147  1.00 33.36           O
ATOM   4327  O   HOH W 118    -2.236  10.267  44.511  1.00 37.52           O
ATOM   4330  O   HOH W 119    37.565   5.895  49.683  1.00 46.73           O
ATOM   4333  O   HOH W 120    33.584  -5.835  22.780  1.00 32.49           O
ATOM   4336  O   HOH W 121    35.462 -21.282  38.394  1.00 55.47           O
ATOM   4339  O   HOH W 122    16.865 -19.547  21.306  1.00 27.44           O
ATOM   4342  O   HOH W 123    12.379   8.941  51.215  1.00 39.45           O
ATOM   4345  O   HOH W 124     7.524 -12.914  23.783  1.00 37.37           O
ATOM   4348  O   HOH W 125     7.002   7.918  39.410  1.00 39.86           O
ATOM   4351  O   HOH W 126    39.630  13.233  34.512  1.00 36.50           O
ATOM   4354  O   HOH W 127    35.097 -11.399  62.096  1.00 37.48          .O
ATOM   4357  O   HOH W 128    21.607   3.999  24.843  1.00 41.76           O
ATOM   4360  O   HOH W 129    22.478 -15.210. 21.158  1.00 33.88           O
ATOM   4363  O   HOH W 130    23.548  -6.336  46.901  1.00 27.09           O
ATOM   4366  O   HOH W 131    39.223  -3.552  31.628  1.00 34.54           O
ATOM   4369  O   HOH W 132    16.042  -7.439  27.693  1.00 35.28           O
ATOM   4372  O   HOH W 133    30.069  15.041  50.355  1.00 37.56           O
ATOM   4375  O   HOH W 134   -12.054  -1.413  27.623  1.00 46.27           O
ATOM   4378  O   HOH W 135    24.926 -21.915  31.263  1.00 35.51           O
ATOM   4381  O   HOH W 136    33.484  17.088  33.716  1.00 41.28           O
ATOM   4384  O   HOH W 137    37.571 -15.077  22.999  1.00 46.63           O
ATOM   4387  O   HOH W 138    -4.651  10.305  28.753  1.00 40.45           O
ATOM   4390  O   HOH W 139     7.244   3.278  47.459  1.00 37.56           O
ATOM   4393  O   HOH W 140    25.957  14.697  25.537  1.00 46.95          O.
ATOM   4396  O   HOH W 141    19.573   8.296  56.060  1.00 52.38           O
ATOM   4399  O   HOH W 142    26.323 -21.066  39.242  1.00 42.83           O
ATOM   4402  O   HOH W 143    25.430 -19.884  49.691  1.00 43.36          ·O
ATOM   4405  O   HOH W 144    13.134 -30.765  15.684  1.00 45.93           O
ATOM   4408  O   HOH W 145    29.414 -21.756  28.642  1.00 50.58           O
ATOM   4411  O   HOH W 146    28.351 -18.821  51.770  1.00 41.18           O
ATOM   4414  O   HOH W 147    12.847 -23.572  13.257  1.00 46.60           O
ATOM   4417  O   HOH W 148     8.003  11.514  41.950  1.00 32.62           O
ATOM   4420  O   HOH W 149    38.748 -13.077  22.902  1.00 39.48           O
ATOM   4423  O   HOH W 150     8.343  10.168  38.934  1.00 42.90           O
ATOM   4426  O   HOH W 151    17.499  -5.735  26.996  1.00 29.41           O
ATOM   4429  O   HOH W 152    18.497  -0.355  36.152  1.00 26.83           O
ATOM   4432  O   HOH W 153    10.174 -26.483  16.855  1.00 37.80           O
ATOM   4435  O   HOH W 154    11.960  -1.336  55.400  1.00 43.14           O
ATOM   4438  O   HOH W 155    29.996  15.804  31.898  1.00 35.23          O·
ATOM   4441  O   HOH W 156    28.284 -14.512  16.257  1.00 40.72           O
ATOM   4444  O   HOH W 157    41.746   5.776  38.906  1.00 36.43           O
ATOM   4447  O   HOH W 158   -10.695   2.291  31.483  1.00 42.36           O
ATOM   4450  O   HOH W 159    37.788 -19.823  39.112  1.00 47.59          ·O
ATOM   4453  O   HOH W 160    23.881   6.960  58.056  1.00 35.00           O
ATOM   4456  O   HOH W 161    37.835 -14.490  31.875  1.00 34.79           O
ATOM   4459  O   HOH W 162    35.191   5.005  55.163  1.00 40.96           O
ATOM   4462  O   HOH W 163    21.856  10.212  28.395  1.00 42.57           O
ATOM   4465  O   HOH W 164    -7.866  11.842  42.057  1.00 53.86           O
ATOM   4468  O   HOH W 165    35.283  -3.744  22.596  1.00 42.31           O
ATOM   4471  O   HOH W 166    29.408  17.784  33.686  1.00 51.95           O
ATOM   4474  O   HOH W 167    19.792   8.386  31.441  1.00 36.33           O
ATOM   4477  O   HOH W 168    39.386 -12.644  30.998  1.00 43.83           O
ATOM   4480  O   HOH W 169    14.210   8.710  34.935  1.00 38.49           O
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Figure 5-47

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ATOM    4483  O    HOH W 170     -5.030   17.943   30.092   1.00 55.72         O
ATOM    4486  O    HOH W 171     44.458   -4.818   59.172   1.00 43.22         O
ATOM    4489  O    HOH W 172    -10.799    5.249   33.071   1.00 52.86         O
ATOM    4492  O    HOH W 173      8.773  -12.249   21.595   1.00 42.84         O
ATOM    4495  O    HOH W 174     39.315   13.813   31.995   1.00 40.45         O
ATOM    4498  O    HOH W 175     19.345   -4.575   27.677   1.00 26.54         O
ATOM    4501  O    HOH W 176      9.152    4.798   41.127   1.00 44.65         O
ATOM    4504  O    HOH W 177     28.512  -22.950   39.300   1.00 56.07         O
ATOM    4507  O    HOH W 178     41.587   -8.759   40.287   1.00 41.14         O
ATOM    4510  O    HOH W 179     21.621    6.663   57.083   1.00 36.44         O
ATOM    4513  O    HOH W 180      9.788   -6.595   52.966   1.00 39.02         O
ATOM    4516  O    HOH W 181     32.993    5.439   58.873   1.00 37.18         O
ATOM    4519  O    HOH W 182    -10.042    7.844   34.829   1.00 60.37         O
ATOM    4522  O    HOH W 183     20.861   -6.982   62.399   1.00 32.09         O
ATOM    4525  O    HOH W 184     -6.232   14.991   37.302   1.00 42.96         O
ATOM    4528  O    HOH W 185     -7.879   13.524   37.344   1.00 56.51         O
ATOM    4531  O    HOH W 186     35.635  -18.895   25.202   1.00 60.71         O
ATOM    4534  O    HOH W 187     13.615   -5.237   56.777   1.00 48.24         O
ATOM    4537  O    HOH W 188     32.787   13.021   46.944   1.00 42.47         O
ATOM    4540  O    HOH W 189     17.043   10.116   36.657   1.00 50.03         O
ATOM    4543  O    HOH W 190     41.663   10.689   42.712   1.00 40.86         O
ATOM    4546  O    HOH W 191    -10.897    3.639   28.980   1.00 49.46         O
ATOM    4549  O    HOH W 192     23.217  -25.005   43.748   1.00 41.96         O
ATOM    4552  O    HOH W 193      0.389    5.266   38.980   1.00 40.10         O
ATOM    4555  O    HOH W 194     24.283  -18.189   53.591   1.00 39.92         O
ATOM    4558  O    HOH W 195     33.143  -19.554   25.314   1.00 45.80         O
ATOM    4561  O    HOH W 196     42.547    2.043   37.753   1.00 36.29         O
ATOM    4564  O    HOH W 197     26.096  -25.410   42.175   1.00 51.95         O
ATOM    4567  O    HOH W 198     19.467    5.706   28.424   1.00 38.46         O
ATOM    4570  O    HOH W 199     41.634   -3.401   46.403   1.00 37.73         O
ATOM    4573  O    HOH W 200      8.916  -29.184   15.174   1.00 32.07         O
ATOM    4576  O    HOH W 201     -5.981   13.741   39.552   1.00 43.85         O
ATOM    4579  O    HOH W 202     20.014    6.137   59.702   1.00 49.66         O
ATOM    4582  O    HOH W 203     34.515  -16.284   22.972   1.00 49.72         O
ATOM    4585  O    HOH W 204     13.868    9.800   45.959   1.00 49.78         O
ATOM    4588  O    HOH W 205     -9.716    5.553   30.224   1.00 51.40         O
ATOM    4591  O    HOH W 206     -1.734    2.388   27.339   1.00 46.37         O
ATOM    4594  O    HOH W 207     26.024  -26.041   39.793   1.00 68.04         O
ATOM    4597  O    HOH W 208     12.610    1.249   53.646   1.00 46.84         O
ATOM    4600  O    HOH W 209     10.206    1.865   27.799   1.00 48.09         O
END
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